Infection Prevention in Alternative Health Care Settings

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KEYWORDS

• Infection prevention • Programs • Skilled nursing facilities
• Ambulatory care setting

Health care delivery in the United States has evolved significantly over the latter part of the twentieth century. Health care delivery has moved from acute care facilities to skilled nursing facilities (SNFs), rehabilitation units, assisted living, home, and outpatient settings. Measures to reduce health care costs have led to a reduced number of hospitalizations and shorter lengths of stay (with an increase in the severity of illness among hospitalized patients including more frequent intensive care unit admissions), along with increased outpatient, home care, and SNF stays for older adults.[1–3]

This review focuses on infection control issues in SNFs and ambulatory clinics.

INFECTION PREVENTION PROGRAMS IN SNFs

SNFs are emerging as a major health care delivery site. Approximately 1.43 million older adults reside in Centers for Medicare and Medicaid Services certified SNFs (2006 data). About 3% to 15% of such patients acquire an infection in these facilities. In a year, there are approximately 2.1 million discharges from SNFs, with the primary reason for discharge being death or transfers to hospitals. These numbers are expected to grow as the population ages.[2]

SNFs provide 2 distinct types of care for older patients: (a) long-term care for older adults with irreversible functional and cognitive deficits and (b) subacute care for patients who require a short admission to complete their medical treatment plan and regain their functional strength before returning to their independent living.

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Infect Dis Clin N Am 25 (2011) 271–283
doi:10.1016/j.idc.2010.11.008 **id.theclinics.com**
0891-5520/11/$ – see front matter. Published by Elsevier Inc.

Because SNFs accept increasingly complex patients from acute care settings, infection prevention becomes crucial. Infection prevention research in the SNF setting has made enormous strides in the last 2 decades. There is an increasing recognition that infection prevention strategies have to be more individualized than in hospital settings, and residents' social well-being remains paramount.

However, SNFs have unique characteristics that create special challenges in implementing an effective infection prevention program. First, SNF residents are particularly susceptible to infections because of multimorbidity, greater severity of illness, functional impairment, cognitive impairment, incontinence, and the frequent use of short-term and long-term indwelling devices such as urinary catheters and feeding tubes. Second, SNF residents may also serve as host reservoirs for antimicrobial resistant pathogens such as methicillin-resistant *Staphylococcus aureus* (MRSA) and vancomycin-resistant enterococci (VRE). With reduction in the length of hospital stay, the severity of illness among residents of the subacute care nursing unit has increased with resultant inherent rapid transfers to a hospital. Older adults serve as vectors, transmitting pathogens from one setting to another. Third, utility of diagnostic specimens is often limited because of the difficulty in obtaining specimens from older adults (such as a clean catch urine sample or a sputum sample) and the lag time between specimen acquisition and clinical evaluation. Conversely, some tests might be more frequently performed and might lead to inappropriate antibiotic usage. All these factors combined create an environment where vulnerable residents are highly prone to infections and acquisition of resistant pathogens. The diagnostic dilemmas often lead to suboptimal management of infections in older adults and make infection prevention programs even more crucial.

INFECTION PREVENTION PROGRAM IN SNFs: FUNCTIONS, COMPONENTS, AND OVERSIGHT

Main functions of an infection prevention program include (a) obtaining and managing critical data, including surveillance information for endemic infections and outbreaks; (b) developing and updating policies and procedures; (c) developing individualized interventions to prevent infections and antimicrobial resistance; and (d) educating and training health care workers (HCWs), patients, visitors, and nonmedical caregivers.[1]

An effective infection prevention program includes a method of surveillance for infections and antimicrobial resistant pathogens, an outbreak control plan for epidemics, isolation and standard precautions, hand hygiene, staff education, an employee health program, a resident health program, policy formation and periodic review with audits, and a policy to communicate reportable diseases to public health authorities. An infection preventionist (IP) is crucial in developing and executing an infection prevention program.

Information Transfer During Care Transitions

Transitional care is defined as "a set of actions designed to ensure the coordination and continuity of health care as patients transfer between different locations or different levels of care in the same location."[4] For older adults, these locations include acute care hospitals, nursing homes, SNFs, rehabilitation units, assisted living facilities, inpatient hospice care, home care, and outpatient primary and specialty clinics. During these care transitions, older adults are particularly prone to fragmented care that can lead to errors and omissions in health care delivery. These transitions also provide an opportunity for pathogens to be transferred from one setting to another.