



SAN MATEO COUNTY HEALTH SYSTEM

Infection Prevention and Control in Long-Term Care Medical Facilities

The elderly population has an increased incidence of many infectious diseases. The vulnerability to infection experienced by the elderly population is likely due to many factors, including age-related decrease in immune function, concurrent diseases, thinning skin, urinary retention, and decreased clearance of organisms from mucous membranes. In a long-term care medical facility (LTCF), this population is also vulnerable to infection, due to severity of existing medical conditions, medications that decrease immune status, impaired mental status, incontinence, and indwelling devices. Residents may be transferred to a LTCF rapidly following hospitalization, and therefore their illness level may be of high acuity.

Transmission of infection in a LTCF is most frequently by direct contact, such as hands; however, airborne, droplet, and vector-borne transmission also occurs, as well as transmission through food and water. Spread of infection may be enhanced by lack of hand washing facilities, shared rooms, or compromised ventilation systems.

Infection control in a LTCF should address the following components:

- Employee health
- Employee education about infection control
- Resident health monitoring
- Surveillance for infections within the facility
- Isolation precautions
- Disease reporting
- Outbreak management

Employee health issues that are likely to be present are immunization screening, exclusion from work, sick-leave policies, exposure to blood-borne pathogens, and post-exposure follow-up. All employees should have an initial assessment of their medical history, health status, and immunizations. A history of past varicella, measles, hepatitis, and recurrent skin infections should be sought.

The importance of educating employees about infection prevention measures is particularly important in facilities that have high rates of turn over with their employees. Education and training related to basic infection control measures should involve ALL staff, and should be offered to all new hires. Information about disease transmission, hand washing, personal protective equipment, and respiratory hygiene apply to ALL employees; education about symptom or problem recognition should be especially focused on those who provide direct patient care.

Resident health, especially preventive health should be a routine component of a LTCF infection control program. A direct approach to immunization should be part of every infection control program in LTCFs. The three most important vaccines for elderly residents of these facilities are influenza vaccine, pneumococcal vaccine and tetanus-diphtheria-acellular Pertussis (Tdap) vaccine.

Collection of data on facility-acquired, or nosocomial infections is also an aspect of infection prevention. The information obtained will play a role in the detection of outbreaks, increases in infection rates, and problems requiring some type of specific infection control intervention. Monitoring of disease patterns over time may also provide information on the effectiveness of infection control practices and policies, and also identify areas for additional training and staff education.

Isolation precautions and appropriate use of personal protective equipment are important ways to prevent cross- infection within the facility. In general, a LTCF should use the isolation precaution guidelines from the Centers for Disease Control and Prevention ¹. These guidelines recommend standard precautions for use on all residents, with the addition of special organism precautions (for example, airborne, droplet, and contact precautions) for specific diseases.

Outbreak Management

An outbreak is generally defined as an increase in the expected number of cases of an infection in a group of people or setting in a short period of time. For some types of infections, such as tuberculosis (TB) or meningitis, a single case may be all that is required to define an outbreak. Common outbreaks in LTCF include influenza, TB, salmonella, E.coli, viral gastroenteritis, scabies, conjunctivitis, and Methicillin resistant *Staphylococcus aureus* (MRSA).

At the onset of an outbreak of any kind, LTCFs should expect to contact their licensing facility (California Department of Health Services Licensing & Certification Division), and the local health department (San Mateo County Health Department). Both entities will provide recommendations for management and control of the outbreak. Compliance with the recommendations from the health department is voluntary; however, the licensing agency has the authority to mandate cooperation with recommendations from EITHER entity. Additionally, recommendations for management and control of an outbreak are provided so that the outbreak can be ended quickly.

Typically, a facility should assign a point-of-contact who will communicate with the licensing agency and the investigation team from the health department. The health department will assist the facility to formulate a case definition, that is, a list of signs and symptoms that are criteria for an affected person to be counted as a "case." A list of all residents and staff who meet the case definition should be provided to the health department daily, and as requested by the licensing agency. If any residents who meet case definition are transferred to another facility during their illness, the health department, as well as the receiving facility should be notified.

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Checklists are offered by the health department to assist facilities during outbreaks, and help with issues such as infection control and prevention, and management of residents, staff, volunteers, and visitors, and environmental, food service and activities. Please call San Mateo County Health Department at 650-573-2346 to report outbreaks or visit www.smhealth.org/cdcontrol.

Footnotes

¹ Garner, JS and Simmons BP (1996). Guideline for Isolation Precautions in Hospitals. *Infection Control and Hospital Epidemiology* 17: 53-80.

References

Smith, PW and Rusnak, PG (1997). Infection Prevention and Control in the Long-Term Care Facility. *Infection Control and Hospital Epidemiology* 18(12), 831-849.