may not initially manifest typical influenza signs and symptoms [434, 435]. Therefore, during an institutional influenza outbreak, there should be a low threshold for suspecting influenza and initiating antiviral treatment without waiting for the results of influenza molecular testing. Although early antiviral treatment of persons with influenza may reduce the risk of influenza virus transmission to exposed close contacts, the magnitude of this effect is unknown, and therefore other control measures also should be implemented as soon as possible (Table 10). Since not all persons who receive a 5-day antiviral treatment course

Table 10. Control Measures for Managing Institutional Influenza Outbreaks

Level	Control Measures
Resident level	• Identify and isolate all ill residents or patients with suspected or laboratory-confirmed influenza; encourage ill residents to stay in their rooms as much as possible • Ask ill residents or patients with suspected or laboratory-confirmed influenza to wear facemasks when out of their rooms • Promptly identify influenza virus infection in residents and initiate antiviral treatment in suspected or confirmed influenza cases as soon as possible • Encourage and facilitate frequent hand washing • Educate residents or patients and their families on respiratory etiquette • Arrange beds in rooms housing >1 resident to maximize distance between the heads of beds to at least 2 meters or approximately 6 feet • Once an influenza outbreak is declared (when 2 cases of laboratory-confirmed influenza are identified within 72 hours of each other in residents or patients of the same ward or unit), start empiric antiviral treatment of newly symptomatic residents with a neuraminidase inhibitor as soon as possible
Ward/unit level	• Implement droplet precautions when providing care for ill residents or patients, in addition to standard precautions already in place regardless of symptoms. • Cohort ill residents by rooming together, or in group activities such as dining or recreation • Post signs diverting nonessential visits • Minimize or restrict staff working on affected wards from working on nonaffected wards • Post signs to remind staff and visitors to wash hands, wear facemasks, and to adhere to standard, contact, and droplet precautions when entering rooms of ill residents or patients • Add distance between individuals during mealtimes and activities, eg, eating just outside of or in their rooms rather than a common dining area • Keep residents on their wards; prohibit or, as feasible, limit and do not overlap movement of residents of affected wards to nonaffected wards or common areas • Once an outbreak is declared, administer empiric antiviral chemoprophylaxis with a neuraminidase inhibitor as soon as possible to asymptomatic exposed residents on the affected ward or unit • Close affected wards to new admissions • Once an influenza outbreak is declared, consider whether to offer empiric antiviral chemoprophylaxis with a neuraminidase inhibitor to unvaccinated staff on the affected ward/unit, including staff with influenza vaccine contraindications or immunocompromised staff (who are expected to have poor immune response to vaccination) for the duration of the outbreak • If there is substantial antigenic drift between circulating influenza viruses and influenza vaccine virus strains, consider whether to extend empiric antiviral chemoprophylaxis with a neuraminidase inhibitor to all staff on the affected ward/unit with an influenza outbreak, regardless of influenza vaccination status
Building level	• Cohorting of ill persons if isolation or nursing unit–level cohorting is not possible at the building level in multibuilding facilities • Once an influenza outbreak is declared, consider whether to offer empiric neuraminidase inhibitor chemoprophylaxis and treatment to all staff working in buildings with residents having new respiratory illness, not just on the affected unit(s)/ward(s)
Institution level	• Have annual influenza vaccination programs in place for residents or patients and healthcare personnel • Have policies and procedures for identification and management of an influenza outbreak, including occupational health aspects (eg, which staff should receive antiviral treatment or chemoprophylaxis, be referred for influenza testing and antiviral treatment; policies for sick leave and return to work) • Have mechanisms in place for rapid collection and handling of respiratory specimens from ill residents or patients and healthcare personnel for influenza testing, preferably by molecular assays. If influenza molecular assays are negative, test specimens for other respiratory pathogens, since noninfluenza respiratory viruses and bacteria infections have also been associated with respiratory disease outbreaks in healthcare and long-term care facilities; the nonpharmaceutical control measures apply to these as well • Implement active daily surveillance for any new respiratory illness (eg, fever, increased work of breathing, coughing, or sneezing) among residents or patients and staff. Respiratory symptoms, even without fever, should trigger suspicion for influenza, especially in elderly individuals. Nonrespiratory manifestations, such as altered mental status, may also be a sign of influenza virus infection in elderly patients • Collect respiratory specimens for influenza testing (preferably by molecular assay such as RT-PCR, if available) from all new symptomatic residents or patients to facilitate identification of the end of the outbreak and inform the extent (units or wards affected) and duration of outbreak control interventions. • Any ill staff who develop respiratory symptoms should don a facemask and promptly be excluded from the facility and, if indicated, be offered or referred for empiric antiviral treatment or have influenza testing performed. Institute a policy where ill staff do not return to work until afebrile >24 hours without antipyretic treatment and with improvement in respiratory symptoms or no earlier than 5 days after illness onset, because lack of fever does not necessarily mean lack of infectiousness • Post and display information about influenza illness signs and symptoms, facility policies related to influenza prevention and control, influenza vaccine recommendations, outbreak activity, and precautions for visitors and staff • Have procedures in place to actively screen all visitors for any illness signs and symptoms, and prohibit anyone with any illness from visiting • Offer influenza vaccination to unvaccinated staff members and residents or patients, and oseltamivir chemoprophylaxis to staff for 14 days after influenza vaccination. If influenza vaccine is not available, antiviral chemoprophylaxis can be offered to all unvaccinated staff for the duration of an institutional outbreak • Notify local public health authorities as soon as possible of a suspected or confirmed influenza outbreak