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## Sharing Eyedrops between Patients: When Will It End?

*To the Editor*—The Centers for Disease Control and Prevention recently released a Morbidity and Mortality Weekly Report on 6 outbreaks of adenovirus-associated keratoconjunctivitis in 4 US states occurring between 2008 and 2010.<sup>1</sup> These epidemics occurred in outpatient ophthalmologic clinics and a neonatal intensive care unit, and a total of 411 cases were identified. A goal of the American Academy of Ophthalmology Infection Prevention Statement (2012) is zero tolerance for healthcare-associated infections. The academy acknowledges that adenovirus is the main cause of nosocomial outbreaks of conjunctivitis occurring in eye clinics, nursing homes, and child care centers and that transmission can occur from ophthalmic solutions and instruments. The academy condones the practice of sharing eyedrop containers between patients on the condition that they are discarded if the patient has an obvious eye infection or the container tip has direct contact with the patient's tears or conjunctiva.<sup>2</sup> However, it may not always be apparent to the healthcare worker that a patient has an infectious eye disease. Adenovirus can be transmitted a few days before symptoms develop and can be shed long after symptoms have resolved. Some patients are asymptomatic, and others may have mild symptoms.<sup>1–3</sup> Clearly, if there is any physical contact between the eyedrop bottle and the conjunctiva, eyelashes, or tears, there is the potential to transmit disease to other patients.

Prior studies have shown that adenovirus is a virulently growing organism that can survive in the eyedrops of patients with confirmed adenovirus for up to 9 weeks after contamination.<sup>4,5</sup> In several studies, many organisms have been grown from ophthalmology solutions that were used on multiple patients in a variety of settings, including a primary care setting, ophthalmology clinics, and long-term care facilities. These include normal skin contaminants, such as coagulase-negative *Staphylococcus*, *Propionibacterium acnes*, and *Streptococcus viridans*, as well as pathogens such as *Pseudomonas putida*, *Burkholderia cepacia*, and *Serratia marcescans*.<sup>6,7</sup>

Currently, most healthcare facilities consider larger-volume

eyedrop medications for multipatient use to be more economically viable than single-patient-use eyedrop vials. However, this ignores the cost of outbreaks of nosocomial infections related to the use of multipatient eyedrop bottles. As we strive to reduce all healthcare-associated infections, we should encourage the manufacture of inexpensive single-patient eyedrops for use in healthcare facilities. While there is any opportunity for the transmission of bacteria or viruses to occur, it is surprising that the sharing of any kind of medication between patients in healthcare settings is still considered acceptable practice.

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**Joanne Kinlay, RN, BSN, MMedSci(ClinEpi), CIC<sup>1</sup>**

Affiliation: 1. Infection Prevention and Control, Boston Children's Hospital, Boston, Massachusetts.

Address correspondence to Joanne Kinlay, RN, BSN, MMedSci(ClinEpi), CIC, Infection Prevention and Control, Boston Children's Hospital, 300 Longwood Avenue, Boston, MA 02115 (joanne.kinlay@childrens.harvard.edu).

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