



This is an official **DHEC Health Advisory**

Distributed via Health Alert Network
November 29, 2017; 9:45 AM
10405-DHA-11-29-2017-EKC

Epidemic Keratoconjunctivitis (EKC) in Midlands Area

Summary

An increase in the number of cases of epidemic keratoconjunctivitis (EKC) has been reported to the South Carolina Department of Health and Environmental Control (DHEC) by the ophthalmology staff in a Midlands-area clinic. Two patient specimens have tested positive for adenovirus type 8. Additionally, multiple environmental samples from the clinic have also tested positive for adenovirus (type not yet determined).

EKC is a particularly severe acute eye infection that can cause complications including corneal scarring. EKC is highly infectious, and EKC-associated adenovirus can be persistent in the environment for extended periods. Typical methods of environmental and medical device cleaning may be inadequate to eliminate this adenovirus. Additionally, outbreaks or clusters of EKC are often associated with transmission in both the community and healthcare settings.

DHEC advises providers to be aware of this highly infectious disease in the community and its potential to spread in healthcare settings. Clinics that are seeing an increase in the number of EKC cases suggestive of an outbreak are encouraged to report this to the appropriate regional public health office (contact information listed below).

Guidance for clinicians

Symptoms

EKC is characterized by lacrimation, florid conjunctival injection with edema and even membrane formation, eye pain and photophobia. Recovery is often prolonged.

Transmission and Risk Factors

EKC is spread easily via fomite transmission and person-to-person contact. Adenovirus has an incubation period of approximately 2-14 days, and the contagious period starts from late in the incubation period to two weeks after onset (prolonged viral shedding has been reported). Adenovirus has a very low infectious dose and is hardy in the environment and is often resistant to commonly used disinfectants. Therefore, the healthcare setting can be a common site of EKC transmission.

Consistent with the SC school and childcare exclusion policy, any child in these settings who has a viral conjunctivitis should be excluded from attending while signs and symptoms of infection are present and at least four days after their onset.

Guidance for Any Providers Seeing Patients with Suspected Conjunctivitis:

- Wear gloves when examining patients or contacting patients with eye symptoms, and perform proper hand hygiene before and after patient contact. Do not use the same pair of gloves for more than one patient.
- Healthcare professionals with suspected conjunctivitis should be excluded from patient contact for at least 14 days after onset of symptoms.
- Avoid shaking hands with patients suspected of having conjunctivitis.
- If consultation is required, please alert consulting clinic of presumed EKC diagnosis so appropriate precautions are implemented at initial patient contact.

Additional Guidance to Prevent EKC Transmission in the Healthcare Setting:

- Cohort patients with suspected EKC. Designate separate sign-in sheets, pens, exam rooms, waiting areas, and exam equipment for patients with symptoms of conjunctivitis.
- During an outbreak, do not use contents from eye drop bottles for more than one patient to avoid possible contamination of medication stock bottles.
- Avoid tonometry except when medically necessary. Clean and disinfect tonometer tips between patients according to manufacturer's instructions.
- Clean and disinfect reusable medical equipment between patients according to manufacturer's instructions (NOTE: Bleach solution is effective against adenovirus but may not be compatible with all medical equipment. Some data suggests that 70% isopropyl alcohol and 3% hydrogen peroxide are **not** effective against adenovirus.)
- Clean and disinfect exam room surfaces and other high-touch areas between patients using an EPA-registered disinfectant with proven efficacy against adenovirus. Ensure the product is used according to the manufacturer's instructions (including sufficient surface contact time, etc.).

Testing

EKC is typically diagnosed clinically. Confirmation of the causative agent may be done via laboratory testing of a specimen collected from a suspected EKC case with recent onset. A conjunctival swab is the preferred specimen, but a nasopharyngeal (NP) swab combined with an oropharyngeal (OP) or throat swab may also be helpful. DHEC can assist with testing of both conjunctival swabs and NP/OP swabs. However, providers should consult with their regional public health office before collecting specimens.

Treatment

Treatment of EKC is typically supportive including cold compresses and artificial tears. Management may include topical corticosteroids or topical cycloplegic medications for severe cases. Corticosteroids can relieve some symptoms but may also increase the duration of infection. Anti-viral agents have not been shown to be effective.

Resources for Additional Information

Infection Control Guidance for Healthcare Settings:

1. For routine infection prevention measures, please see the *Guide to Infection Prevention for Outpatient Settings: Minimum Expectations for Safe Care* available at: <http://www.cdc.gov/HAI/settings/outpatient/outpatient-settings.html>.
2. For information on disinfectants effective against Adenovirus 8, please see *Efficacy of Hospital Germicides against Adenovirus 8, a Common Cause of Epidemic Keratoconjunctivitis in Health Care Facilities* available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1426955/>
3. For sterilization and disinfection information, please see the *Guideline for Disinfection and Sterilization in Healthcare Facilities* (2008) available at: <https://www.cdc.gov/infectioncontrol/guidelines/disinfection/index.html>.
 - a. Information regarding the disinfection of tonometers is available on page 18 of this document.

Reporting cases

Reporting of **clusters and outbreaks** is consistent with South Carolina Law requiring the reporting of diseases and conditions to your state or local public health department. (State Law # 44-29-10 and Regulation # 61-20) as per the DHEC 2017 List of Reportable Conditions available at: <http://www.scdhec.gov/Library/CR-009025.pdf>

Federal HIPAA legislation allows disclosure of protected health information, without consent of the individual, to public health authorities to collect and receive such information for the purpose of preventing or controlling disease. (HIPAA 45 CFR §164.512).

Regional Public Health Offices – 2017

Mail or call reports to the Epidemiology Office in each Public Health Region

MAIL TO:

Lowcountry	Midlands	Pee Dee	Upstate
4050 Bridge View Drive, Suite 600 N. Charleston, SC 29405 Fax: (843) 953-0051	2000 Hampton Street Columbia, SC 29204 Fax: (803) 576-2993	145 E. Cheves Street Florence, SC 29506 Fax: (843) 661-4859	200 University Ridge Greenville, SC 29602 Fax: (864) 282-4373

CALL TO:

Lowcountry	Midlands	Pee Dee	Upstate
<p>Berkeley, Charleston, Dorchester Phone: (843) 953-0043 Nights/Weekends: (843) 441-1091</p> <p>Beaufort, Colleton, Hampton, Jasper Phone: (843) 322-2453 Nights/Weekends: (843) 441-1091</p> <p>Allendale, Bamberg, Calhoun, Orangeburg Phone: (803) 268-5833 Nights/Weekends: (843) 441-1091</p>	<p>Kershaw, Lexington, Newberry, Richland Phone: (803) 576-2749 Nights/Weekends: (888) 801-1046</p> <p>Chester, Fairfield, Lancaster, York Phone: (803) 286-9948 Nights/Weekends: (888) 801-1046</p> <p>Aiken, Barnwell, Edgefield, Saluda Phone: (803) 642-1618 Nights/Weekends: (888) 801-1046</p>	<p>Chesterfield, Darlington, Dillon, Florence, Marlboro, Marion Phone: (843) 661-4830 Nights/Weekends: (843) 915-8845</p> <p>Clarendon, Lee, Sumter Phone: (803) 773-5511 Nights/Weekends: (843) 915-8845</p> <p>Georgetown, Horry, Williamsburg Phone: (843) 915-8804 Nights/Weekends: (843) 915-8845</p>	<p>Anderson, Oconee Phone: (864) 260-5581 Nights/Weekends: (866) 298-4442</p> <p>Abbeville, Greenwood, McCormick Phone: (864) 260-5581 Nights/Weekends: (866) 298-4442</p> <p>Cherokee, Greenville, Laurens Pickens, Spartanburg, Union Phone: (864) 372-3133 Nights/Weekends: (866) 298-4442</p>

For information on reportable conditions, see
<http://www.scdhec.gov/Health/FHPP/ReportDiseasesAdverseEvents/ReportableConditionsInSC/>

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