

PROFESSIONAL PRACTICE

Infection Control and Prevention for School Psychologists: A Self-Care Primer

By Steven R. Shaw

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Self-care for school psychologists has received overdue attention in scholarly literature and training. Most work in self-care relates to mental health problems arising from the stressful and emotional nature of work in school psychology. However, there is an additional component of self-care that has yet to receive appropriate levels of attention. Infection control and prevention (ICP) is not only an important aspect of self-care for school psychologists, but is also an aspect of ethical, safe, and sustainable service delivery to students, schools, and communities.

Infection control and prevention involves behaviors and resources that minimize the spread of infections in public settings (Herstein, Springer, Anzalone, Medcalf, & Lowe, 2018). Schools involve large groups of children in proximity. There is potential for rapid and widespread transmission of disease. School psychologists are at risk for experiencing a variety of infections and for serving as a vector to spread infection. School psychologists spend much of their time close to young children and students with disabilities (Obeng-Gyasi, Weinstein, Hauser, & Obeng, 2018). Due to poor hygiene, these populations are at high risk for infections. In addition, school psychologists often travel from school to school and can serve as a vector that transmits infection across multiple school environments. Therefore, school psychologists are an important target for interventions that improve behaviors supporting ICP.

Many school systems and all hospital systems provide information or inservice training in ICP. Although information is helpful, these one-time training events may improve knowledge of ICP, but may not sufficiently change behaviors. For best practices in ICP to be implemented, knowledge, skill development, supervision, and accountability of ICP behaviors require integration into the preservice training, practice, and culture of school psychology. Self-care is most effective when integrated throughout professional training rather than serving as an out-of-context or post-hoc addition.

Communicable Diseases

Cold and flu. *Cold and flu are respiratory viruses of varying severity.* Nearly everyone contracts an occasional cold. The flu tends to be more severe and is the leading cause of hospitalizations due to vaccine preventable disease. Cold and flu viruses tend to be transmitted via droplet. In addition to hand hygiene, isolation, minimizing touching of face, and disinfection, covering mouth and nose when coughing or sneezing is an important behavior in reducing the spread of cold and flu.

Norovirus and rotavirus. There are many bacteria, viruses, and parasites that cause gastrointestinal illness. Norovirus and rotavirus are the most common causes among children (Parra et al., 2017). Symptoms include diarrhea, vomiting, high fever, lethargy, and pain. Those with norovirus and rotavirus need to be monitored closely because dehydration due to vomiting and diarrhea can be dangerous. Symptoms are often present for 3 to 10 days. Rotavirus infections are common in children ages 3 to 35 months. Even school-age children with exposure to younger siblings and adults who care for these children are at high risk. Norovirus is the most common viral cause of epidemic gastroenteritis worldwide (Parra et al., 2017). Moreover, both norovirus and rotavirus are highly contagious, and the virus can live on solid surfaces for up to 10 days. Fecal

transmission is the most common vector, and hygiene is a critical component of managing transmission.

Pink eye. Conjunctivitis is inflammation of the covering of the white of the eye and inside of the eyelids. The main types of conjunctivitis are viral, bacterial, and allergic. Viral and allergic forms of conjunctivitis clear up on their own in a few days. However, bacterial conjunctivitis can cause serious damage to the eye if untreated and may require an antibacterial ointment or drops. Conjunctivitis is extremely contagious. Both viruses and bacteria can live on hard surfaces for an extended length of time. Sanitizing tables, chairs, doorknobs, and other solid surfaces are good general practices. Developing a habit of not touching one's face can also be helpful.

Lice and scabies. Lice, also known as pediculosis, are small insects that live on the skin. They most often live in the hair on the scalp or pubic area. Scabies is a condition caused by mites, which are tiny, insect-like animals that dig under the skin. Both conditions cause itching. Both conditions are usually transmitted from skin-to-skin contact and can be transmitted by infested clothing or shared grooming tools. Treatment is typically effective. However, lice and scabies are highly contagious and can easily spread quickly through a school or daycare setting.

Tetanus. Tetanus is a serious bacterial toxin that is rare in North America due to the prevalence and effectiveness of vaccinations. Tetanus is not transmitted person-to-person. However, bites from children can transmit a variety of bacterial infections, including tetanus.

Hepatitis A. Hepatitis A is an infectious disease of the liver that may cause severe complications. Early symptoms of hepatitis A are easily mistaken for the symptoms of influenza or food poisoning. There are several mechanisms by which hepatitis A can be transmitted. Blood and blood products are one method. For school psychologists, fecal transmission is more likely. As hepatitis A is often associated with poor hygiene and contaminated food preparation, it is far easier to transmit than other forms of hepatitis or HIV. Vaccinations are available for hepatitis A and recommended.

Other. There are many other infections and diseases that are widely transmitted in school settings and among children. Some of them are meningitis; childhood illnesses (e.g., measles, mumps, rubella, whooping cough); mold exposure; hand, foot, and mouth disease; and foodborne illness (e.g., hepatitis A virus, Salmonella Typhi, Shigella spp., and Escherichia coli).

Foundation

Understanding the foundation of the mechanism of infection is a first step in developing an effective school-based ICP program. The factors that are necessary for the occurrence of an infection or disease are a source, a susceptible person, and transmission.

Source. Sources are places where infectious agents (germs) live. The most common source of germs is people. Further caution should also be considered because animals are also a source of germs. A classroom hamster, turtle, or fish tank can be sources for illnesses such as lymphocytic choriomeningitis virus and salmonella. Germs also remain active on surfaces. Damp surfaces (e.g., wet towels) are common sources of germs. Some viruses remain alive on dry surfaces for 72 hours or more. Tables, books, and doorknobs can be sources of germs.

Susceptible person. For an infection to take place, there must be a way for germs to enter the body. There are children with compromised immune systems (e.g., children receiving chemotherapy, HIV positive, diabetes, receiving some antibiotics or steroids, unvaccinated) who have limited ability to resist introduction of germs into the system. In addition, many susceptible people also have a high risk of more severe symptoms and worse outcomes should an infection occur. Skin conditions or open sores provide access for infectious agents to enter the body. Cover minor cuts, scrapes, or sores on hands to minimize risks. Mucous membranes are also an entry point for germs. The habits that many people have of rubbing their eyes or touching their face needs to be minimized because this behavior provides access for infectious agents to enter the body.

Transmission. The way germs are moved to the susceptible persons varies for different types of infections. Germs do not move to infect people, they must be transmitted through vectors. Touch is a common mode of transmission. Methicillin-resistant Staphylococcus aureus (MRSA) and

vancomycin-resistant enterococci (VRE) are extraordinarily serious infections that are transmitted by touch and commonly transmitted by healthcare workers, including psychologists. Lice and scabies are also transmitted via touch. Fecal transmission is common source of transmission as well (e.g., norovirus, hepatitis A). Most respiratory colds and flus are transmitted through droplets, which are most commonly due to coughs or sneezes. Droplet transmission most often takes place when the transmitting person is within 6 feet of the infected person. Droplets can also be transferred from hands to eyes, nose, and mouth. Other germs are aerosolized and survive on air currents over great distances and time to reach a susceptible person (e.g., measles, tuberculosis). Finally, some germs are transmitted through bloodborne transmission. These are rare for school psychologists, but possible when there are open sores (e.g., hepatitis B and C).

Best Practices

Universal precautions. Also known as routine practices, universal precautions have the assumption that any interaction is a potential contagious situation. Universal precautions began in the medical community, where all blood and other bodily fluid are treated as infectious. As such, all fluids are to be treated with extreme caution. In the case of school psychologists, coughs, sneezes, surfaces, and physical touches should be considered to be possible vectors for contagious infections. This mindset will assist in the development of effective ICP practices.

Hand hygiene. Simple handwashing dramatically reduces the probability of infection transmission. Most healthcare systems require professionals to wash their hands in front of patients or clients before any procedure. This is a helpful habit (Sickbert-Bennett et al., 2016). There is no need to use antibacterial soaps, as simple soap and warm water is effective. However, access to soap and water in most classrooms or rooms where testing and therapy takes place is rare; in situations such as these, waterless antibacterial solutions are effective. Open sores on hands (e.g., paper cuts) are potential transmission sites and should be covered. Examination gloves are sometimes a good option. Finally, the habit of school psychologists touching their face is common and efforts should be made to reduce this behavior.

Disinfection. Antibacterial wipes and soap and water are helpful to reduce the presence of germs on hard surfaces. Testing tables, doorknobs, chairs, and even test equipment benefit from being cleaned. The habit of cleaning the environment after every use is a set of behaviors worth practicing. In many cases, especially working with preschoolers or in situations at high risk for infection, testing materials can also be disinfected. Materials that have been touched by children or contacted surfaces touched by children require cleaning. Porous surfaces are difficult to disinfect and require extra care. For example, paper is difficult to disinfect, so having children touch and turn pages of a testing manual is not recommended. Paper and cardboard surfaces that can be reasonably laminated can facilitate cleaning. Stuffed animals and plushy toys are also extremely difficult to disinfect and should be minimized.

Isolation. Encouraging students with any illness or infection to stay home is an excellent plan. However, many children begin to display symptoms during the school day, and school serves as daycare for many parents. Having a child stay home from school because of illness is a significant hardship for many families. There is also heavy emphasis on increasing attendance in school. As such, students who appear to have mild illness attend school. Many schools have school nurses with facilities for a student to stay in the school building, but isolated from their age peers. Even if there are no school nurse facilities, a procedure and location for isolating students who may show symptoms of illness or infection can help reduce any potential contagion and minimize possible outbreaks.

Self-isolation. School psychologists and educators in general often have minor colds or illnesses, but continue to work. Consider the context in which work takes place before making this decision. If the work involves proximity to students who are possibly immunocompromised, then even the most minor illness precludes work for that day. Due to privacy issues, school psychologists may not know which children are immunocompromised. Extremely contagious illnesses that are not serious (e.g., pinkeye) might require spending the day in the office conducting administrative work. Sometimes the

most professional thing a psychologist can do is avoid transmitting illness to others and staying home. The primary issue is to ensure that the school psychologist is not themselves a disease vector that spreads the infection.

Vaccinations. Quality ICP practices involve professionals being fully vaccinated. For professionals over 30 years of age, childhood vaccinations may have lost effectiveness over the years and may require boosters (Vilar-Compte, de-la-Rosa-Martinez, & Ponce de León, 2018). Contracting childhood illnesses (e.g., measles, mumps, rubella) as an adult has severe health consequences. School psychologists need to be aware of their community norms as well. There are significant antivaccination communities that place professionals at risk. Professionals who may be pregnant are at especially high risk when working with children who have not received childhood vaccinations. Annual flu vaccinations are strongly recommended for school psychologists even if they are in otherwise low-risk groups. Adding to herd immunity and reducing the possibility of psychologists acting as disease vectors are important reasons for flu vaccine. In addition, regular tetanus, hepatitis A, and perhaps other effective vaccinations may be appropriate depending on the vulnerability of the psychologist, risk factors in the community, and scope of practice.

Communication

Knowing the specific behaviors involved in ICP is not enough. There is a matter of developing a mindful habit of best practices. To be most effective, ICP is implemented across all educational professionals, taught to students, and evaluated so that all persons are accountable for ICP in practice. The most effective approach to implementation is to have support at high levels of administration, a mechanism for increasing knowledge, prioritizing time for training and practice, and a system for assessment and accountability of ICP practices. Designating a specific person as being responsible for school-wide ICP is an important aspect of implementation. Usually this person is the school nurse. Coordination among school nurse, administration, and school psychologist can result in effective efforts to spread knowledge, implement behavior change, and evaluate the ICP program in a systematic manner.

Conclusions

There are many aspects to self-care for school psychologists. A neglected component of self-care is appropriate and effective infection control and prevention practices. Although information and knowledge concerning ICP is widely available, integrating habitual behaviors in a systemic manner to reduce the risk of exposure to infections and reduce the risk of spreading infections to vulnerable populations is more challenging. Healthcare professions have found that training and adopting effective ICP practices has been stubbornly difficult to implement on a universal basis (Herstein et al., 2018). Effective ICP practices can be most effective when introduced early in training and reinforced as a critical learning objective with every new professional milestone involving direct contact with children and families (e.g., practicum, field placements, internships, new employment). These practices are not difficult skills to learn and adopt, but given the high-risk nature of school psychology practice and the risk of disease and infection outbreaks, high priority should be placed on preservice and professional development training and reinforcement of ICP practices.

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Resources

The Centers for Disease Control and Prevention has excellent resources for all health care and educational institutions: <https://www.cdc.gov/infectioncontrol/index.html>

The Canadian Patient Safety Institute provides quality information on creating an infection control and preventions system: <https://www.patientsafetyinstitute.ca/en/Topic/Pages/Infection-Prevention-and-Control.aspx>

Extremely detailed list of resources designed for nurses in an infection control and prevention practice: <https://www.cno.org/en/learn-about-standards-guidelines/educational-tools/infection-prevention-and-control>

International infection prevention week provides strong ideas about appropriate school infection control practices: <http://professionals.site.apic.org/settings-of-care/non-healthcare-setting/school/>

An example of a school-based program for controlling diseases and disease outbreaks in schools: [https://www.swpublichealth.ca/sites/default/files/userfiles/files/Infectious Diseases/Guidelines for the Control of Infectious Diseases and Outbreaks in Schools .pdf](https://www.swpublichealth.ca/sites/default/files/userfiles/files/Infectious%20Diseases/Guidelines%20for%20the%20Control%20of%20Infectious%20Diseases%20and%20Outbreaks%20in%20Schools.pdf)

STEVEN R. SHAW, PhD, NCSP, is Associate Professor of Educational and Counselling Psychology at McGill University in Montreal, Quebec