



# GUIDANCE DOCUMENT



## THE NURSE'S OFFICE: CLEANING THE SAFE AND HEALTHY WAY Guidance for School Nurses

Children are at greater risk for exposure to toxic chemicals. It is important to avoid introducing unneeded chemicals into the school environment while cleaning. Nurses can play a key role in supporting the green cleaning law while ensuring that proper infection control measures are followed. This document provides guidance for the use of green cleaners, sanitizers and disinfectants in the school nurse's office.

The Green Cleaning law *Public Act No. 09-81: AN ACT CONCERNING GREEN CLEANING PRODUCTS IN SCHOOLS* is intended to improve the indoor air quality in school environments. The law requires that environmentally preferable cleaning products, where available, be used in schools by July 2011. Such products are available as general purpose cleaners, bathroom cleaners, carpet cleaners, glass cleaners, hand cleaners and soaps. However, there are no environmentally preferable cleaning products available at this time for any disinfectant, disinfecting cleaner, or sanitizer. Because of the nature of the school nurse's office, there are instances where a sanitizer or disinfectant must be used.

### Definitions for Cleaning Products:

All purpose cleaners **remove** dirt and most organisms.

Sanitizers **reduce** bacteria (e.g., MRSA) to a level considered safe by Public Health codes. They must be registered by the U.S. EPA.

Disinfectants **destroy** multiple organisms including bacteria and many viruses (e.g. influenza) Disinfectants are regulated by the U.S. EPA. They may contain active ingredients such as chlorine, phenolics, quaternary ammonium compounds (quats), alcohols, or hydrogen peroxide compounds.

School nurses should work with their facilities director and cleaning chemical suppliers to assure that only U.S. EPA registered sanitizers and disinfectants are used and that there is consistency with the products used throughout the school.

### When using a disinfectant:

- Select product carefully.
- Know what bacteria/viruses it is effective against. Information can be found at: <http://www.epa.gov/oppad001/chemregindex.htm>
- Know how to use it correctly. **READ THE LABEL** to determine the appropriate:
  - application procedure
  - dilution
  - contact/"dwell" time (time needed for disinfectant to work as indicated)
  - personal protective equipment (PPE)
- Clean surfaces before use. Disinfectants cannot penetrate the dirt/microbe barrier.
- Only disinfect surfaces that have been contaminated by blood, vomit or feces.

**There should be a plan on when and where to disinfect that employs a prudent and targeted use of disinfectants. Keep a written protocol on file.**

### **Using Bleach Safely & Effectively**

Bleach has been used for years as a disinfectant in health care facilities. However, bleach is corrosive and an irritant, especially to asthmatics and can be dangerous to health. It is the cause of many childhood poisonings. Dangerous fumes are produced when mixed with ammonia products. It is recommended that an alternative to bleach be used to sanitize or disinfect where necessary. Choose the least toxic U.S. EPA registered sanitizer or disinfectant for the task. Information about products and ingredients can be found on the CT DEP database at:

<http://www.kellysolutions.com/CT/pesticideindex.htm>

#### **If bleach is used:**

- Treat as toxic:
  - Train staff in the proper use.
  - Use in well ventilated areas, wear gloves.
  - Use away from children
- Open a new bottle every month as bleach loses its effectiveness when stored; make dilution daily.
  - Dilutions will differ depending on the strength (5.25% or 6.0%) and the intended use.  
Use 1 tbsp 6.0% bleach with 1 gallon water dilution for sanitizing and 1/4 cup 6.0% bleach with 1 gallon of water for disinfecting.
  - Label container with name of product, health hazard information, use and date prepared.
- Use prudently and appropriately (only on surfaces that need to be disinfected, e.g. where there is blood, vomit, feces).
- Limit spraying onto surfaces. Use a pump bottle or spray onto a cloth and wipe.
- Areas must be cleaned with a general purpose cleaner/soap & water BEFORE bleach is applied.
- Bleach solution should be left on surface for 2 minutes or allowed to air dry. If the area/item is going to be used right away, rinse.

### **READ THE LABEL**

#### General Warning Categories

Look for signal words:

Most dangerous	↓	Poison	Highly toxic
		Danger	
		Warning	
Least Dangerous	↓	Caution	Mild/moderate

Use the least hazardous product.

#### Disinfectant Types

Use the least toxic disinfectant for the situation:

↓	Chlorine	(most toxic)
	Phenolics	
	Quaternary Ammonias	
↓	Hydrogen Peroxide	(least toxic).

Look for the U.S. EPA Registration number. Any sanitizer/disinfectant used must be U.S. EPA registered to assure effectiveness against targeted organisms.

## Green Cleaning

Green cleaning products are designed to have less adverse effect on human health and the environment when compared to other cleaning products that serve the same purpose. Traditional cleaners may contain chemicals that are asthma triggers or other respiratory irritants.

Use green cleaners to clean before sanitizing and on surfaces for general cleaning.

In order for a product to be considered “green”, it must meet the following criteria:

- Work as well as or better than product it is replacing;
- Contain no fragrances,
- Low VOCs (volatile organic compounds),
- Health rating with minimum health effects (0-1).

True green products are certified by an independent third party such as Green Seal (<http://www.greenseal.org>), Eco-Logo (<http://www.ecologo.org/en/index.asp>) or Design for the Environment (DfE). (<http://www.epa.gov/dfe>). The CT Green Cleaning law requires such certification.

Many products are advertised as “green”, however they may still contain some harmful ingredients. Look at the label. Material Safety Data Sheets (MSDS) are available for all products. Look for a low health hazard rating of 0-1 and/or no danger warnings or the lowest danger level. Look for products with less toxic ingredients such as plant-based ingredients, no ammonia, no bleach, no fragrance, and with a more neutral pH (7).

Work with suppliers/vendors to get product information.

Green cleaning also encompasses the use of equipment such as dilution stations that use a concentrated product diluted for several tasks, materials such as microfiber cloths that trap dust more effectively, and use of cleaning best practices such as cleaning spills immediately.

## Cleaning The School Nurse’s Office

The OSHA Blood Borne Pathogen (BBP) standard should be applied to any surfaces contaminated with blood, vomit or feces.

Green cleaners can be used to clean the surface before applying the disinfectant. Areas touched by many hands such as cots, chairs, toys, etc. should be cleaned more frequently with a general purpose green cleaner and microfiber cloth. Applications of any disinfectant should be done with adequate ventilation, in the absence of children or periods of lowest occupancy when possible. Use the least amount of disinfectant as recommended. During an outbreak of GI illnesses or flu, clean/sanitize high touch points between uses.

Obtaining products: It is crucial to work with the facilities director to coordinate product purchasing and for advice on specialty products such as specific disinfectants. Individual nurses cannot bring in/purchase products that have not been approved by the school. This includes hand sanitizers. The facilities director must be aware of all products in use at the school and keep on hand corresponding MSDS information.

Information about DAS/state approved green products can be found at: <http://das.ct.gov/cr1.aspx?>

For more information:

- CT DPH: <http://www.ct.gov/dph/ieq>; <http://www.ct.gov/dph/schools>
- INFORM Cleaning for Health: <http://informinc.org>
- CT Foundation for Environmentally Safe Schools: <http://www.pollutionfreeschools.org>
- Cleaning for Healthy Schools - Infection Control Handbook: <http://www.informedgreensolutions.org/?q=publications/school-disinfection-handbook>

## Role of the School Nurse in Promoting Environmental Health

The school nurse should play a role in educating students, staff and parents about the new law and the prohibition on bringing/sending in any cleaners, sanitizers or disinfectants. They should also educate the school community about what infection control measures are in place. The National Association of School Nurses states that school nurses are in a position to advocate for a “safe school environment as they are in close contact with staff, students, families, community members and healthcare providers” (NASN, 2005). The environmental component of the Coordinated School Health Program provides a model for a physically and psychologically healthy work and learning environment and suggests that the school nurse monitor, report and intervene as necessary to promote and support a healthy environment for students and staff (Allensworth & Kolbe as cited in Marx & Wooley, 1998; CDC, 2010). Today’s school environment can be filled with many types of environmental toxins, and communicable and infectious agents that can impact the health and welfare of students and others in the school community. The school nurse as the health expert in the school can help to mitigate or eliminate environmental pollutants and pathogenic organisms in the school health setting by giving proper adherence to cleaning the safe and healthy way.

Included in the scope and standards of professional nursing performance, is the environmental health standard which requires that school nurses (registered nurses) practice in an environmentally safe and healthy manner. To accomplish this standard, school nurses must then:

- attain knowledge of environmental health concepts, such as implementation of environmental health strategies;
- promote a practice environment that reduces environmental health risks of workers and healthcare consumers;
- assess the practice environment for factors such as sound, odor, noise and light that negatively affect health;
- advocate for the judicious and appropriate use of products used in health care;
- communicate environmental health risks and exposure reduction strategies to healthcare consumers, families, colleagues and communities;
- utilize scientific evidence to determine if a product or treatment is a potential environmental threat; and
- participate in strategies to promote healthy communities (ANA. Nursing: Scope and Standards of Practice, second edition 2010).

### Reference:

1. American Nurses Association 2010 (ANA). *Nursing: Scope and Standards of Practice Second Edition*. Silver Spring, Maryland: Nursesbooks.org.
2. Marx, E. and Wooley, S., with Northrup, D. (1998). *Health is academic*. New York City, NY: Teachers College Press.
3. National Association of School Nurses 2005 (NASN). *School Nursing: Scope and Standards of Practice*. Silver Spring, MD: Nursesbook.org/American Nurses Association.
4. National Association of School Nurses (NASN). *Position Statement. Environment impact concern in the school setting*. Available at <http://www.nasn.org>