To: Jackson, Ryan[jackson.ryan@epa.gov]
From: Cathy Stepp
Sent: Fri 6/16/2017 3:22:18 AM
Subject: Call

Hi Ryan. Would u have time for a quick call on Friday?

Thanks

Cathy Stepp

Sent from my iPhone

To: Jackson, Ryan[jackson.ryan@epa.gov]; Willson, James (EPW)[James_Willson@epw.senate.gov]
Cc: Etzel, Ruth[Etzel.Ruth@epa.gov]; Edwards, Jonathan[Edwards.Jonathan@epa.gov]; Rowson, David[Rowson.David@epa.gov]; Nse Witherspoon[nobotw@gmail.com]; jphoenix@gwu.edu[jphoenix@gwu.edu]; Elleka Yost[eyost@asbointl.org]; Ellerson Ng, Noelle[nellerson@aasa.org]; smason_chps.net[smason@chps.net]; Donna Mazyck[dmazyck@nasn.org]; AShore@sbh4all.org[AShore@sbh4all.org]; llowery@ashaweb.org[llowery@ashaweb.org]; bonniemelendez007@gmail.com[bonniemelendez007@gmail.com]; Claire Barnett[cbarnett@healthyschools.org]
From: Claire Barnett
Sent: Mon 8/28/2017 5:25:15 PM
Subject: For EPA Admin Pruitt - re Hurricane Harvey - floods, molds and EPA budget
pehsu flood_hurricane_2015.pdf
pehsu- R6_Mold_in_the_Home_and_School-final.pdf

Reminder – EPA budget – and Hurricane Harvey.

We are seeking $65M for EPA to allocate across its programs to improve school buildings and to protect kids' health.

Disaster Example. Hurricane Harvey and flooding.

- EPA and CDC co-designate and co support a network of Pediatric Environmental Health Specialty Units (PEHSUs). See http://www.pehsu.net/

  - See EPA/6 (TX and more) PEHSU at http://www.pehsu.net/region6.html

  - See attached PEHSU's unique guides on floods and growing molds, and children's health.

- Also see EPA's Indoor Environments Division tips re emergencies/disasters - see https://www.epa.gov/indoor-air-quality-iaq/emergencies-and-iaq

Claire L. Barnett, MBA, Founder and Executive Director

Healthy Schools Network, Inc.

(w) 518-462-0632

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Coordinator, National Coalition for Healthier Schools

...providing the platform and the forum for environmental health at school ... since 2001

HealthySchools.org – for children, health, environment, education and communities since 1995

NationalHealthySchoolsDay.org – celebrated every spring since 2002

CleaningforHealthySchools.org – green & healthy products for schools

PEHSU
Pediatric Environmental Health Specialty Units

Clinician Recommendations Regarding Return of Children to Areas Impacted by Flooding and/or Hurricanes:

Introduction

Children are especially vulnerable to environmental hazards. Despite being smaller than adults, their metabolic rates are higher relative to their size. They breathe and consume more per pound of body weight than adults. The developing fetus and child are susceptible to toxic exposures which can result in profound negative effects. Common exploratory behaviors often place them in direct contact with materials that adults would avoid.

There may be direct and indirect health consequences of floods. Direct exposure to the water and the flooded environment put children at risk for drowning, injuries from debris, chemical contamination, and hypothermia. In addition, there are risks associated with the damage done by the water to the natural and built environment, including infectious diseases, malnutrition, poverty-related diseases, and diseases associated with displaced populations. Key issues for habitability of an area impacted by flooding and/or hurricanes include restoration of drinking water and wastewater treatment facilities, return of safe road conditions, removal of solid waste and debris, and replacement or remediation of flood damaged homes. Before children return, schools and outdoor play areas should be cleaned and ready for use. Children and, whenever possible, teens should not be involved in cleanup efforts but should return after the area is cleaned up. In short, children should be the last group to return to areas impacted by flooding and/or hurricanes.

These recommendations also apply to pregnant women.

Note: This document does not contain specific criteria or a comprehensive list of environmental hazards. The decision to bring children and other residents back to areas impacted by flooding and/or hurricanes rests with local, State, and Federal officials. Standards for environmental testing and clean up should be adopted by local health officials drawing upon relevant existing evidence-based guidelines and in consultation with experts in children's health and the environment. In the aftermath of a flood, particular attention should be paid to issues relating to water contamination and mold, in addition to common pediatric environmental concerns such as physical safety, lead, asbestos, and chemicals.

Health Consequences of Floods

Immediate Health Effects

- Drownings are the leading cause of death from floods and are more likely to occur from flash flooding.
  - Most fatalities occur when using a motor vehicle and attempting to cross flooded roads or from crashes on wet roadways.
  - Drownings also occur during evacuation and rescue.

- Injuries can occur during the flood or upon return to an unstable structure.

- Water close to electrical lines, circuits, or equipment can cause an electrical hazard.

- Floodwaters may disrupt gas lines and chemical storage tanks leading to burns and explosions.

- Hypothermia can occur in any season as most flood water is well below human core body temperature.

- Health services can be impacted resulting in limited access to care for patients.

Secondary Health Effects

- Floodwaters may increase the potential for infectious diseases.
  - Contaminated water can result in waterborne disease transmission (E.coli, Shigella, Salmonella, and Hepatitis A virus)
  - Fecal contamination of livestock and crops may lead to infectious diseases.
  - Temporary shelters may result in crowded and unsanitary living conditions.
  - Vector-borne disease may increase during flooding.

- Chemical contamination can result from the unintended spread of fertilizers, pesticides, and industrial chemicals. An awareness of local land-use is important for assessing this risk.

- Carbon monoxide poisoning is a common risk due to unventilated gas-powered electrical generators, pressure washers, cooking tanks, and house fires.

- Respiratory problems account for high morbidity due to mold and other materials that can be inhaled.

- Animal displacement increases the risk of bites and transmission of diseases to humans by rodents and sick animals.

- **Long-term Health Consequences**

  - Exacerbation of chronic diseases such as asthma, allergies, or ear, nose or throat conditions can occur during the flood and clean-up stages due to poor outdoor and indoor air quality.

  - Mental health problems are common occurrences after disasters, including floods, especially in children.
    - Management of mental health problems in children have not been fully addressed in many disaster plans resulting in poor accessibility for this population.
    - Suicides are 14% higher in adults compared to pre-disaster rates and can increase the mental health consequences in children.

  - Social disruption can result in significant health consequences.
    - Antisocial/violent behavior (e.g. assaults, gunshots, rape)
    - Destruction of public health infrastructure
    - Poor nutrition due to decreased food supplies and livelihood

Optimal health of children requires completing the following items before children return to areas impacted by flooding and/or hurricanes:

- Basic utilities and public services:

  - The water supply is re-established, and water for drinking and bathing must meet applicable existing standards for biological, chemical, and mineral contaminants.

  - The supply of electricity and gas is restored, as applicable, and damage to the transmission system and/or gas pipes is repaired.

  - A reliable food supply that includes infant formula and food is reestablished and appropriate food storage conditions are in place.

  - The communication system including 911 access is restored, reliable, and readily accessible. Families must be able to contact local authorities and health facilities when necessary.

  - Healthcare services, including mental health services, are available and accessible.

- Families returning know the location and status of their nearest medical treatment facility, and the route to reach it is open and passable.
- Emergency services are functional.
- Medications and medical supplies are readily accessible.

- The sanitation system (including sewage) is functional and debris and regular trash collection is re-established.

- Living and learning spaces (including homes, schools, and day-care facilities) are free from physical and environmental hazards to children.

  - Buildings are appraised for damage and, if damaged, a decision made to either destroy/rebuild or remediate.

  - If renovating, all flood hazards are addressed.
    - Grossly contaminated wallboard, insulation, flooring, and other porous materials have been safely removed and replaced following existing EPA guidelines.
    - Work should be done by contractors who are properly trained and qualified.

  - If rebuilding, the new structure is completed to the point of safe occupancy

- Spaces where children play should be clear of debris and free from environmental hazards to children

  - Some designated outdoor areas (parks, playgrounds, yards, etc.) have been cleaned and made free of safety hazards and environmental hazards.

  - Areas not-cleaned should be inaccessible to children.

  - Routes to and from living, learning, and playing places have been cleaned and made free of safety hazards and environmental hazards.

More detailed information about the return of children to these areas can be found at the Centers for Disease Control and Prevention web site (www.cdc.gov) and the US Environmental Protection Agency web site (www.epa.gov).

For additional information, contact the Pediatric Environmental Health Specialty Unit serving your area at www.pehsu.net or 1-888-347-2632 or the American Academy of Pediatrics (www.aap.org).

This document was developed by the Association of Occupational and Environmental Clinics (AOEC) and funded under the cooperative agreement award number 1U61TS000118-02 from the Agency for Toxic Substances and Disease Registry (ATSDR). Acknowledgement: The U.S. Environmental Protection Agency (EPA) supports the PEHSU by providing funds to ATSDR under Inter-Agency Agreement number DW-75-92301301-0. Neither EPA nor ATSDR endorse the purchase of any commercial products or services mentioned in PEHSU publications.

PEHSU
Pediatric Environmental Health Specialty Units

Mold in the Home and School

Guidance for parents, families and school personnel

What is mold?

Molds are fungi, such as mildew, mushrooms and yeast that can be found both indoors and outdoors. No one knows for sure how many species of fungi exist but estimates range from tens of thousands to perhaps three hundred thousand or more. They have been known for centuries.

How does mold grow?

Mold needs water and food. Mold can grow almost anywhere there is water, high humidity, or damp conditions. Molds are often found in homes and schools that have been flooded or have had water leaks. Mold grows faster in warm temperatures and high humidity. Molds can even grow in desert areas if evaporative (swamp) coolers are used. Mold can feed on paper, fabric, wallpaper glue, sheetrock, wood, soap scum, leather, and many other surfaces. Molds grow by producing very small spores that can settle on wet surfaces and grow to the visible forms of mold common in the bathroom of most homes and schools.

How are children exposed to mold?

Children can be exposed to molds in the home as well as at schools. The most common areas in a home are where water is present, such as bathrooms. In schools, bathrooms, shower rooms and laboratories are environments suitable for mold growth. Mold exposure can also occur in any area where water from a leak comes in contact with paper, fabric, wallpaper glue, sheetrock, wood, and other surfaces. In addition, mold can grow on cold surfaces due to condensation of water on cold surfaces, particularly if these surfaces can serve as "food" for molds. There have been cases of children with health effects from mold growth in gyms with wet walls due to condensation.

You can breathe the mold particles if mold is disturbed. You can breathe in mold spores (usually not visible) that mold releases in the air. You can touch mold and get it on your skin. You can also swallow mold if you eat moldy or spoiled food like moldy bread.

What are the health effects of mold?

Some people are allergic to molds. Mold exposure may worsen asthma symptoms, hay fever, or other allergies. The most common symptoms of mold exposure are cough, congestion, runny nose, and trouble breathing. Symptoms usually disappear after the mold contamination is

removed. Exposures to very large mold growth from flooded buildings presents more potential for respiratory problems than common exposures found in homes and schools, particularly if ventilation is on as this may disperse mold spores throughout the building.

Should I have my home/school tested for mold?

Generally, it is not necessary to identify the species of mold growing in a residence, and the Centers for Disease Control and Prevention (CDC) does not recommend routine sampling for molds. Current evidence indicates that allergies are the type of diseases most often associated with molds. Since the susceptibility of individuals can vary greatly either because of the amount or type of mold, sampling and culturing are not reliable in determining your health risk. If you are susceptible to mold and mold is seen or smelled, there is a potential for health effects; therefore, no matter what type of mold is present, you should arrange for its removal. Mold testing is expensive and the results are not always related to health risk.

Should I see a doctor if my child has been exposed to molds at home or at school?

If you think that your children have symptoms related to mold exposure in your home, you should see a doctor. If the exposure was from school, you should also notify the school nurse or administrators. Keep in mind that many symptoms associated with mold exposure are also caused by many other illnesses. The extent of mold exposure (small spot in bathtub versus large area of extensive mold growth due to flooding) is also a factor in seeking medical attention.

How can you reduce mold in your home or school?

The best way to reduce mold exposure in your home is to remove water and moisture sources. Fixing leaks, drying damp areas, and removing humidity from the air (e.g., using a dehumidifier in basements; opening a window while taking a shower in bathrooms with no exhaust vent) will help limit mold growth and keep it from coming back. In schools, administrators and maintenance personnel must be notified to correct leaks and remove moisture sources as well as remove moldy ceiling tiles and similar materials.

How do you clean up mold on a surface in your home?

The best way to clean mold from surfaces such as shower walls is to use detergent and water. Diluted household bleach (no more than one cup of bleach in one gallon of water) may be used to clean hard surfaces; however, you should avoid its use in confined areas (showers and closets) and should never mix bleach with other household cleansers. If you have breathing problems (asthma, emphysema, COPD), you should avoid the use of bleach altogether. If large areas of a home have mold growth, such as might occur from flooding, then a professional mold remediation contractor should be contacted.

In schools, maintenance personnel may be able to clean up small areas of mold and remove stained, wet ceiling tiles and other moldy surfaces. The best way to eliminate mold is to make sure that the source of water is stopped.

Mold spores are difficult to kill and some will remain in a home or school even after a cleanup. It is very important to reduce or eliminate moisture in areas prone to mold growth. This can be done by use of exhaust fans in bathrooms and increased ventilation in school rooms. If moisture remains, mold will grow again from the microscopic spores.

Resources

Pediatric Environmental Health Specialty Units (PEHSU), a local and national resource at www.pehsu.net
Centers for Disease Control and Prevention. http://www.cdc.gov/mold/default.htm
U. S. Environmental Protection Agency http://www.epa.gov/mold/index.html
U.S. Environmental Protection Agency, Fact sheet, molds in schools
https://www.epa.gov/sites/production/files/201408/documents/moldfactsheet.pdf
U.S. Environmental Protection Agency, Interactive mold house tour
https://www.epa.gov/mold/interactive-mold-house-tour

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ACKNOWLEDGEMENT: This publication was supported by the cooperative agreement award number 1U61TS000118-05 from the Agency for Toxic Substances and Disease Registry (ATSDR). The U.S. Environmental Protection Agency (EPA) supports the Pediatric Environmental Health Specialty Unit (PEHSU) by providing funds to ATSDR under Inter-Agency Agreement number DW-75-92301301-0.