The SARS Outbreak

Severe acute respiratory syndrome (SARS) is a viral respiratory illness caused by a coronavirus, called SARS-associated coronavirus (SARS-CoV). SARS was first reported in Asia in February 2003. Over the next few months, the illness spread to more than two dozen countries in North America, South America, Europe, and Asia. The SARS global outbreak of 2003 was contained; however, it is possible that the disease could re-emerge.

According to the World Health Organization (WHO), during the SARS outbreak of February-July 2003, a total of 8,437 people worldwide became sick with SARS; of these, 813 died. In the United States, there were 192 cases of SARS, all of whom got better. Most of the U.S. SARS cases were among travelers returning from other parts of the world with SARS. There were very few U.S. cases among close contacts of travelers, including health-care workers and family members.

In general, SARS begins with a high fever (temperature greater than 100.4ºF). Other symptoms may include headache, an overall feeling of discomfort, and body aches. Some people also have mild respiratory symptoms at the outset. About 10 percent to 20 percent of patients have diarrhea. After 2 to 7 days, SARS patients may develop a dry cough. Most patients develop pneumonia.

The main way that SARS seems to spread is by close person-to-person contact. The virus that causes SARS is thought to be transmitted most readily by respiratory droplets (droplet spread) produced when an infected person coughs or sneezes. Droplet spread can happen when droplets from the cough or sneeze of an infected person are propelled a short distance (generally up to 3 feet) (continued p.2)

Fire Suppression and the Environment

The Montreal Protocol on Substances that Deplete the Ozone Layer (1987) banned production of ozone depleting chemicals such as chlorofluorocarbons (CFCs) which contribute to the destruction of the ozone layer allowing an increase of harmful ultraviolet rays to reach the surface of earth. Among other applications, man-made CFCs are used as fire extinguishing agents, the most common being Halon 1301, installed at Stockton to protect data information systems and the chemical storage area.

In the Focus on Safety issue of Fall 2001 the article Understanding the Ozone Problem explained the mechanism of action of CFCs. When they reach the stratosphere, CFCs absorb ultraviolet radiation and decompose producing chlorine atoms that subsequently catalyze the decomposition of Ozone.

But down on Earth, the main advantage of CFCs, as fire extinguishers, is the low concentration needed to fight a fire, since their effectiveness is based on chemical reaction. CFCs chemically destroy transient combustion products responsible for flame propagation. Only 5% concentration of Halon 1301 in the air is needed to successfully extinguish a fire, therefore minimizing the bulk created by their storage in areas housing electronic equipment or reactive chemicals, where other conventional extinguishers such as water or powder cannot be used safely. (continued p.3)
SARS (continued)

through the air and deposited on the mucous membranes of the mouth, nose or eyes of persons who are nearby. The virus also can spread when a person touches a surface or object contaminated with infectious droplets and then touches his or her mouth, nose or eye(s). In addition, it is possible that the SARS virus might spread more broadly through the air (airborne spread) or by other ways that are not now known.

The Center for Disease Control (CDC), has issued two types of notices to travelers to areas with SARS. A travel advisory recommends that nonessential travel be deferred; a travel alert does not advise against travel, but informs travelers of a health concern and provides advice about specific precautions. The CDC advised that travelers in an area with SARS should wash their hands frequently to protect against SARS infection. In addition, CDC advised that travelers might wish to avoid close contact with large numbers of people as much as possible. CDC did not recommend the routine use of masks or other personal protective equipment while in public areas.

The World Health Organization website states that the global threat of SARS was successfully contained in less than four months. Since many of the symptoms of SARS are similar to influenza, the detection of new SARS cases will demand an increased level of surveillance for health care professionals.

Influenza (flu) is a highly infectious disease of the lungs, and it can lead to pneumonia. Each year about 114,000 people in the U.S. are hospitalized and about 36,000 people die because of the flu. Most who die are 65 years and older. Small children less than 2 years old are as likely as those over 65 to have to go to the hospital because of the flu.

As winter and the flu season approaches, it is very important to wash your hands often. When traveling, alcohol-based hand rubs can be used. Consider getting the flu vaccine since it usually protects most people from the flu.

The CDC has detailed information on their website concerning who should get a flu shot (influenza vaccine). College campuses across the United States should carefully follow the travel advisories published by the Center Disease Control concerning the SARS outbreak. Continued vigilance can help prevent a new outbreak of SARS.

Additional information on college students from the SARS affected areas can be found at http://www.cdc.gov/ncidod/sars/schools.htm. Travel information for employees can be found at http://www.cdc.gov/ncidod/sars/travel.htm. General information on SARS and influenza can be found at www.cdc.gov and www.who.int.

Who Should Get a Flu Shot
(influenza vaccine)

Recommendations of the Advisory Committee on Immunization Practices (ACIP) for the CDC

Groups At Risk for Complications From Influenza

A yearly flu shot is recommended for the following groups of people who are at increased risk for serious complications from the flu:

- persons aged >50 years;
- residents of nursing homes and other long-term care facilities that house persons of any age who have long-term illnesses;
- adults and children>6months of age who need regular medical care or had to be in a hospital because of metabolic diseases (like diabetes), chronic kidney disease, or weakened immune system (including immune system problems caused by medicine or by infection with human immunodeficiency virus [HIV/AIDS]);
- children and teenagers (aged 6 months to 18 years) who are on long-term aspirin therapy and therefore could develop Reye Syndrome after the flu; and
- women who will be more than 3 months pregnant during the flu season.
Oil Pollution Prevention

On July 17, 2002, the Environmental Protection Agency (EPA) issued a final rule amending the Oil Pollution Prevention regulation promulgated under the authority of the Federal Water Pollution Control Act (Clean Water Act). The purpose of the Oil Pollution Prevention regulation (40 CFR 112) is to prevent oil discharges from reaching navigable water of the United States or adjoining shorelines. All facilities, including colleges and universities, that have an aggregate aboveground oil storage capacity of 1,320 gallons and have a reasonable potential for oil spills from the facility to reach a navigable water of the United States must develop and implement a Spill Control and Countermeasure Plan (SPCC).

The Oil Pollution Prevention regulation provides a framework to ensure effective emergency responses to discharges of oils including animal fats and vegetable oils. According to the EPA, spills of animal fats and vegetable oils have the same or similar devastating impacts on the aquatic environment as petroleum oils.

The amended regulation states that all oil bulk storage installations must be constructed in a manner that provides a secondary means of containment for the entire capacity of the largest single container including sufficient freeboard to contain precipitation. The SPCC plan must be designed to identify potential environmental risks and to establish a means of effective emergency response to lessen the damage that could occur in the event of an oil leak, rupture or spill.

Under the Clean Water Act, the EPA can conduct compliance inspection of a facility for which a SPCC plan is required. Unlike oil spill contingency plans that typically address spill cleanup measures after a spill has occurred, SPCC plans ensure that facilities put in place containment and other countermeasures that would prevent oil spills that could reach navigable waters. Additional information concerning the amendments to the Oil Pollution Prevention regulations can be found at the EPA website www.epa.gov

Fire Suppression (continued)

By contrast, although a gas, Carbon Dioxide (CO$_2$) extinguishing action is based on the physical displacement of oxygen below the concentration limits to sustain fire and as much as 30 to 50% CO$_2$ in the air might be needed, with the consequent increase in bulk of storage cylinders supporting an automatic fire suppression system. High toxicity is another obvious problem for CO$_2$ which is in contrast with the low toxicity of CFCs.

Substitution of Halon 1301 in existing automatic fire suppression systems is based on practical as well as environmental reasons. Although a Halon Recycling Corporation has been created to bank existing inventories, prices will continue to escalate due to the decreasing supply. However, most compelling are the environmental reasons, to prevent potential release of existing inventories and further damage to the Ozone layer.

Several substitutes are presently available that are almost as efficient as CFCs, exhibit low toxicity and have zero-effect on the Ozone layer. An example are Hydrofluorocarbons (HFCs) developed by different manufacturers. The best of them still require additional storage capacity - none is as efficient as Halon 1301. Some can still use much of the Halon 1301 hardware and distribution system but they will still require potential modifications. Regardless of the nature of the extinguishing agent, hardware technology for sensors, detectors and automatic delivery systems has been significantly improved in the last ten years, and a total replacement of an aging system might be the best alternative in the long range.

New Air Bag Rule

On September 1, 2003, 20 percent of all new motor vehicles sold in the U.S. must be equipped with advanced air bag technologies and by September 1, 2006 the requirement will apply to all new light trucks and cars. The new standard results from a Congressional mandate in 1998. Advanced air bag technologies vary, but in their simplest forms suppress or reduce the deployment force of the air bag.

New Poison Control Center Number

The American Association of Poison Control Centers has instituted a single telephone number, (800) 222-1222, which will reach local poison control centers. Callers will be automatically connected to the center closest to them. For free packets of poison prevention publications, write to Poison Prevention Packet, CPSC, Washington, DC 20207, or visit http://www.poisonprevention.org.

A Culture of Preparedness

The National Safety Council (NSC) recently published an article that called on all Americans to develop a “culture of preparedness” for emergencies. Alan McMillan, president of the National Safety Council stated that “Individuals should take responsibility for their own safety as much as possible”.

To help residents of Atlantic County keep informed concerning local emergency information, the Office of Emergency Preparedness has developed an Alert System. This system will post Message Symbols regarding weather events, large scale emergencies, homeland security information and special emergency preparedness information on the county website. As needed, active alerts will provide detailed information to keep residents better informed and prepared should an emergency or disaster occur. Information concerning the Atlantic County Alert System can be found at www.aclink.org. For additional information on emergency preparedness, visit the NSC website at www.nsc.org

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NJ Department of Health and Senior Services:
Right to Know Information: (609)984-2202
NJ Department of Environmental Protection:
Community RTK Program: (609)292-6714
NJ Department of Labor (PEOSHA)
Div. of Workplace Safety Std: (609)633-2587
Div. of Workplace Health: (609)984-1863
Federal Department of Labor Occupational Safety & Health Administration (OSHA): (609)757-5181
Campus Police: Emergency ext 911
Non-emergency ext 4390
Poison Control: 1-800-222-1222
Focus on Safety website: http://www.stockton2.edu