Health Education Course

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C O N N E X I O N S

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Chapter 1

Health Education Course, Chapter 1 - PART 1: SERVING CHILDREN'S HEALTH[1]

1.1 Healthy Children Can Learn

The United Nations Cyber Schoolbus tells us about essential issues surrounding health.

FACT:

Infectious diseases are the leading cause of death in the world. Of 52.2 million deaths in 1997, at least 17.3 million were due to infectious diseases.

FACT:

Thirty new diseases have been identified over the past 20 years, among them the deadly Ebola and HIV/AIDS.

FACT:

In the long history of struggle against infectious diseases, humans have only managed to conquer one: smallpox, which was declared eradicated in 1980.

HOPE:

Polio, already eliminated from the western hemisphere, is targeted for global eradication by the year 2000.

What will world health look like at the end of the millennium?

Who will be infected, who's likely to be safe? What is the relation between poverty and disease? Will we eradicate other diseases? What are these new viruses?

But wait, let's take it from the beginning. What are infectious diseases anyway? What are viruses and bacteria? How do we defend against them?

These small units of study shall provide you, the teacher, with some crucial information you need to be an effective caregiver for the children you teach.

1.2 Protection Against Insects - Mosquito Nets and Checking for Ticks

This site describes precautionary measures against malaria: Preventing Malaria[2]

Mosquito Nets

[1] This content is available online at <http://cnx.org/content/m13328/1.3/>.

[2] http://www.aidworkers.net/exchange/20030528.html

Insect-borne infections, such as malaria, can be reduced 10-20 times by mosquito netting. An ideal mosquito net would have a mesh size of 1.2mmX1.2mm and be made of synthetic material or cotton. The net should be wide enough to cover the body but should not touch the body, as insects may then reach the skin through the mesh. The net should completely surround the human so that there are no open gaps through which the insects may enter. Holes should be checked for often, and the net should not be washed. If sprayed with insecticide every six months, the net is much more effective as it then kills any mosquitoes who do enter. For this reason, people already infected with insect-borne illnesses should spray insecticide on their mosquito nets every two weeks, as this will kill any mosquitoes that do feed off the infected bodies and become disease carriers. Permethrin is a safe insecticide that paralyzes mosquitos.

Ideally the nets should be impregnated with the insecticide and would last for six months.

Checking for Ticks

One advantage about ticks is that they do not fly; they can only attach themselves to humans who brush against them. Ticks are most likely to be found in grassy or shrubby areas. They are black and round. If in a tick-infested area, be sure to visually check everyone before leaving. Do not miss hidden places such as under the armpits, or behind the knees. If you find a tick, detach it immediately to prevent further penetration of the skin. If too resistant to hand plucking, use tweezers to pull it out. Then wash the surrounding skin with soap and water.

1.3 Protection Against Insects - Wearing Proper Clothes

Wearing Proper Clothing

The most effective protection from insects is wearing long sleeves and pants during feeding times. Anopheline mosquitoes, the carriers of malaria, bite from dusk to dawn, so protecting yourself during the day is most important. Those near stagnant water should be especially careful as the anopheline mosquitoes breed in water.

Where and When Insects are Most Active

Dusk and dawn are the most active time for insects, so protecting oneself is essential. Limit outdoor activities during these times and stay in protected areas if there are any. Avoid stale water, ditches, or any stagnant water as that is the breeding ground for the malaria-carrying mosquitoes.

Here are three resources that can help you learn more about mosquito-borne diseases, along with prevention:

1. http://www.mosquito-netting.com/
2. http://www.e-ticks.net/
3. http://www.malaria-prevention-info.com/

1.4 Protection Against Illness from Animals - Avoiding Dangerous Animals

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1.5 Avoiding Snakes

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1.6 Contagious People

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1.7 Caution Against Mixing Body Fluids

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1.8 Sexual Safety

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1.9 Maintaining Good Hygiene

According to UNICEF, "more than half of all illnesses and deaths among young children are caused by germs that get into their mouths through food or water or dirty hands. Many of these germs come from human and animal faeces.

Many illnesses, especially diarrhoea, can be prevented by good hygiene practices: putting all faeces in a toilet or latrine; washing hands with soap and water or ash and water after defecating or handling children's faeces, and before feeding children or touching food; and ensuring that animal faeces are kept away from the house, paths, wells and children's play areas.

Everyone in the community needs to work together to build and use toilets and latrines, protect water sources, and safely dispose of waste water and garbage. It is important for governments to support communities by providing information on low-cost latrines and toilet facilities that all families can afford. In urban areas, government support is needed for low-cost sanitation and drainage systems, improved drinking water supply, and garbage collection.

A Dirty Face

A dirty face attracts flies, spreading the germs they carry from person to person. The eyes may become sore or infected and vision may be impaired or lost if the eyes are not kept clean and healthy.

If the eyes are healthy, the white part is clear, the eyes are moist and shiny, and vision is sharp. If the eyes are extremely dry or very red and sore, if there is a discharge or if there is difficulty seeing, then the child should be examined by a health worker as soon as possible.

1.10 Avoiding Standing Water

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1.11 Importance of Boiling Water

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1.12 Keeping the Food Area Clean

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1.13 Girardia

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1.14 Human Waste

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1.15 Nutrition

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1.16 Food Preparation and Care

Cooking food thoroughly kills germs. Food, especially meat and poultry, should be cooked all the way through.

Germs grow quickly in warm food. Food should be eaten as soon as possible after cooking so it does not have time to collect germs.

If food has to be kept for more than two hours, it should be kept either very hot or very cool.

If cooked food is saved for another meal, it should be covered to keep off flies and insects and then thoroughly reheated before being eaten.

Yogurt and sour porridge are good to use in meals because their acid prevents the growth of germs.

Raw food, especially poultry and seafood, usually contains germs. Cooked food can collect germs if it touches raw food. So raw and cooked foods should always be kept away from each other. Knives, chopping boards and surfaces where food is prepared should always be cleaned after preparing raw food.

Breastmilk is the safest milk for infants and young children. Animal milk that is freshly boiled or pasteurized is safer than unboiled milk.

Expressed breastmilk can be stored at room temperature for up to eight hours in a clean, covered container.

Special care should be taken with preparing food for infants and small children. Their food should be freshly made and not left standing, if possible.

Fruit and vegetables should be peeled or washed thoroughly with clean water, especially if they are to be given raw to babies or small children. Chemicals such as pesticides and herbicides cannot be seen on fruit and vegetables but nonetheless can be dangerous.

Germs on food can be swallowed and cause illness. To protect food from germs:

1. food preparation surfaces should be kept clean
2. knives, cooking utensils, pots and plates should be kept clean and covered
3. cloths for cleaning dishes or pans should be washed thoroughly every day and dried in the sun. Plates, utensils and pans should be washed immediately after eating and put on a rack to dry
4. food should be kept in covered containers to protect it from insects and animals
5. feeding bottles or teats should not be used because they can contain germs that cause diarrhoea unless they are cleaned each time with boiling water. Children should be breastfed or fed from a clean, open cup.

1.17 Washing Hands

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1.18 Drinking Fresh Water

Families have fewer illnesses when they have an adequate supply of clean water and know how to keep it free of germs.

If the water is not clean it can be purified by boiling or filtering.

Clean water sources include properly constructed and maintained piped systems, tube-wells, protected dug wells and springs. Water from unsafe sources - such as ponds, rivers, open tanks and step-wells - can be made safer by boiling. Water should be stored in a covered container to keep it clean.

Families and communities can protect their water supply by:

1. keeping wells covered and installing a handpump
2. disposing of faeces and waste water (especially from latrines and household cleaning) well away from any water source used for cooking, drinking or washing
3. building latrines at least 15 metres away and downhill from a water source
4. always keeping buckets, ropes and jars used to collect and store water as clean as possible by storing them in a clean place, rather than on the ground
5. keeping animals away from drinking water sources and family living areas
6. avoiding the use of pesticides or chemicals anywhere near a water source.

Families can keep water clean in the home by:

1. storing drinking water in a clean, covered container
2. avoid touching clean water with unclean hands
3. taking water out of the container with a clean ladle or cup
4. having a tap on the water container
5. not allowing anyone to put their hands into the container or to drink directly from it
6. keeping animals away from stored water.

If there is uncertainty about the safety of the drinking water, local authorities should be consulted.

1.19 Cleaning Food

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1.20 Avoiding Animal Contact with Food

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1.21 Preserving Food

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1.22 Most Vital Immunizations

What are immunizations?

Immunizations, also called vaccinations, are given to protect you from diseases. Each vaccine contains small amounts of a weakened disease organism or its products, which usually are given by injection. Your immune system develops antibodies to fight the disease, which then recognize and attack the organisms if you are exposed to them in the future. Sometimes an immunization does not completely prevent the disease, but it will significantly reduce its severity. Some immunizations are given only once, while others require several treatments over a period of time.

Why get immunized?

There are several reasons to keep childrens' immunizations current:

- Being immunized protects you. Diseases still exist and can infect anyone who has not been vaccinated.
- Being immunized protects those around you. A small number of people cannot be immunized because they have other health problems, such as severe allergies. This leaves them susceptible to diseases. Others are not protected from diseases because they do not develop immunity after having vaccinations. If most people are immunized, it reduces the chance of these nonimmune people contracting the disease.
- Immunizations cost very little-much less than treating the illnesses they prevent.The risks are low. Reactions to immunizations are usually mild and don't last long.
- Immunizations reduce the risk of epidemics.

What immunizations are recommended?

The standard immunization schedule includes vaccines for:

- Diphtheria, pertussis, and tetanus (DTaP).
- Polio (inactivated poliovirus vaccine, or IPV).
- Measles, mumps, and rubella (MMR).
- Chickenpox (varicella).
- Hepatitis B (Hep B).
- Hepatitis A (Hep A).
- Haemophilus influenzae type b (Hib).
- Pneumococcal vaccine (PCV) for children younger than 2 years of age.
- Influenza.

The standard immunization schedule begins at birth. Immunizations are spaced throughout a baby's first 18 months; some are repeated between the ages of 4 and 6. Very few immunizations are needed after this age-just those given yearly (such as a flu shot) or on a regular basis throughout adulthood (such as a tetanus shot).

All immunizations should be kept up-to-date. Additional vaccinations may be needed when traveling to certain parts of the world.

What reactions may result from being immunized?

Minor side effects

Side effects from vaccines are generally minor, if they occur at all. They may include:

- Redness, mild swelling, or soreness where the shot was given.
- Slight fever.
- Drowsiness, irritability, and poor appetite in some babies.
- A mild rash 7 to 14 days after chickenpox or MMR immunization.
- Temporary joint pain after the MMR vaccine.

Severe side effects

More serious side effects occur very rarely. The risk of a serious complication from a disease is far greater than the risk from a vaccine.

Research is currently under way to better understand which reactions may be caused by vaccines and how to reduce even further the already low risk of complications.

Severe reactions to immunizations, such as a very high fever [over 104.5$\hat{A}$°F (40.28$\hat{A}$°C)] or difficulty breathing, are rare. If you or your child has an unusual reaction, notify your health professional.

How effective are immunizations at preventing disease?

Although no vaccine is 100% effective, most routine childhood immunizations are effective for 85% to 95% of the children who receive them.

Some people do not develop complete immunity even when they have had the vaccine. If these people are exposed to the disease, they are likely to become infected. However, symptoms are usually milder as a result of having had the vaccine.

Can vaccines cause other diseases?

Some people have voiced concern about vaccines that contain thimerosal, a mercury compound additive that kills bacteria.

Some people believe that the thimerosal or other components of the measles-mumps-rubella (MMR) vaccine can cause autism. Symptoms of autism often are first noticed around 1 year of age. Because children also receive the MMR vaccine around their first birthday, some people assume there is a link. However, recent studies have found no scientific proof linking adverse effects (such as autism) with thimerosal.

Measles, mumps, and rubella are potentially serious diseases that can cause permanent damage and disability to a child, possibly even death.2, 3 A child who does not have the MMR vaccine is at a much greater risk for developing measles, mumps, or rubella than he or she is for developing autism.

Should I get additional immunizations for protection against possible bioterrorism?

The possibility that biological weapons exist has alarmed many people. In response to the potential threat of these weapons, the U.S. Centers for Disease Control and Prevention (CDC) recommends vaccinations for some people against anthrax and smallpox.

Anthrax recommendation

Anthrax vaccinations are recommended for some laboratory workers, people who work with animals imported from locations without adequate safety standards (such as veterinarians who travel to work in other countries), and certain military personnel. Pregnant women in any of these categories should be vaccinated only if necessary. Anthrax vaccination is not recommended for the general public because of their low risk of infection, and because supplies of the vaccine are very limited.

Smallpox recommendation

Smallpox vaccination recommendations are under review. At this time, vaccination is not recommended for the general public. The U.S. government recommends the vaccine for:

- Laboratory workers who directly handle cultures or animals contaminated or infected with viruses in the same family as smallpox.

Chapter 2

Health Education Course, Chapter 2 - Children and Disease[1]

2.1 Polio

Polio is a highly contagious, sometimes fatal, viral infection that can produce permanent muscle weakness, paralysis, and other symptoms. Polio is spread by swallowing material such as water contaminated by infected feces. The infection spreads from the intestine throughout the body, but the brain and the spinal cord are the most affected.

Symptoms and Diagnosis

Polio in young children is often mild. Symptoms, which begin 3 to 5 days after infection, include an overall feeling of illness (malaise), a slight fever, headache, a sore throat, and vomiting. The child usually recovers within 24 to 72 hours.

More significant illness is more likely in older children and adults. Symptoms usually appear 7 to 10 days after infection and include fever, severe headahce, a stiff neck and back, and deep muscle pain. Sometimes areas of skin develop odd sensations, such as pins and needles or unusually sensitivity to pain. Recovery occurs in 24 to 72 hours. Depending upon the which parts of the brain and spinal cord are affected, the disease may progress no further, or weakness or paralysis may develop in certain muscles. The person may have difficult in swallowing and may choke on saliva, food, or fluids. Sometimes fluids go up into the nose, and the voice may develop a nasal quality.

A doctor an diagnose polio from its symptoms. Diagnosis is conirmed by identifying poliovirus in a stool sample and deteciting high levels of antibodies to the virus in the blood.

Prevention and Treatment

The Polio vaccine is included among the routine childhood immunizations. Two types of vaccines are available: a) an inactivated poliovirus vaccine (Salk vaccine), which is given by injection, and b) a live poliovirus vaccine (Sabin vaccine) taken orally. The live oral vaccine provides better immunity and is usually preferred. It is important to note that, in very rare cases, those with an impaired immune system may actually get polio from the vaccine. A good assessment of those about to receive treatment should reveal whether or not people have an impaired immune system, as well as those who are in close contact with such people.

2.2 Hepatitis B

Hepatitis B is highly endemic in Africa south of the Sahara. Serological evidence of prior hepatitis B infection is present in 70%-90% of the population. The burden of the disease is enormous: mortality from primary

[1] This content is available online at <http://cnx.org/content/m13329/1.5/>.

cancer of the liver ranks either number one or two among cancer deaths in males in Africa. Primary cancer of the liver is 100% fatal and kills at an average age of 35-45 years, causing families to lose parents and wage earners at the most productive periods of their lives.

It is estimated that there are about 50,000 deaths from hepatitis B related cirrhosis and about 130,000 deaths from hepatitis B related primary liver cancer annually in sub-Saharan Africa.

Hepatitis B vaccine is more than 90% effective in preventing hepatitis B infection of children. Despite the high prevalence of infection and the enormous burden of disease, only a few African countries use hepatitis B vaccine routinely with other childhood diseases vaccines.

2.3 Tuberculosis

Tuberculosis (TB) is an infection caused by Mycobacterium tuberculosis, slow-growing bacteria that can thrive in areas of the body with plenty of oxygen and blood flow, such as the lungs.

About 85% of people in the United States with TB have the disease in the lungs (pulmonary TB). Tuberculosis also can spread to other parts of the body (extrapulmonary TB), but this is relatively uncommon.

Tuberculosis is classified as latent TB infection or active TB disease.

Latent TB infection

A latent TB infection occurs when TB-causing bacteria are in the body but there are no signs or symptoms of TB. When the bacteria enter the lungs, the body's immune system fights the infection by walling off the bacteria into tiny capsules called tubercles. In about 90% of people infected with TB, the immune system succeeds in encapsulating the bacteria, and there are no symptoms.

People who have a latent infection cannot spread the bacteria to other people but are at risk of developing active TB disease. Only a skin test can detect latent TB infection.

Active TB disease

Active TB disease occurs when Mycobacterium tuberculosis is found in the body and there are signs or symptoms of TB. About 10% of people infected with the bacteria will develop active TB disease. People who have active disease sometimes have few symptoms and may assume another, less serious problem is causing them. Symptoms of active TB include a persistent cough that brings up thick, cloudy, and sometimes bloody mucus (sputum) from the lungs. Other symptoms that may occur include weight loss, fatigue, night sweats, and fever.

People who have active TB disease can spread the bacteria to other people. If left untreated, active TB can damage the lungs or other organs and possibly cause death.

Doctors use a combination of antibiotics (multiple-drug therapy) to treat active TB, whether it occurs in the lungs or elsewhere. People who have a latent TB infection are treated with one or more antibiotics to prevent the infection from developing into active disease and to reduce the chances that complications will develop. Virtually all people who take their medications as prescribed are cured.

2.4 Meningitus

Meningitis

Topic Overview

Meningitis is an infection of the tissues (meninges) and sometimes the fluid (cerebral spinal fluid) that surrounds the brain and spinal cord. Meningitis results in swelling of the brain tissue and, in some cases, the spinal tissue (spinal meningitis). When brain tissue swells, less blood and oxygen reach brain cells, producing symptoms such as fever, severe headache, and stiff neck.

Meningitis usually is caused by viruses or bacteria. Rarely, organisms such as fungi or parasites or a reaction to a medication can cause meningitis. The infection also can develop as a complication of another illness, an injury, or brain surgery. Sometimes, the cause is not identified.

Meningitis occurs most often in infants, young adults between ages 15 and 24, older adults, and people who have long-standing health conditions. The illness can range from mild to life-threatening. The severity usually depends on the organism causing the infection and a person's age and overall health.

Treatment for meningitis depends on the cause of the infection:

- People with meningitis caused by a virus usually get better in about 2 weeks. They often need only home treatment.
- People with meningitis caused by bacteria need to be treated with antibiotics in a hospital. They are more likely to develop complications during illness and long-term complications. Death can occur if bacterial meningitis is not treated promptly.

2.5 Malaria

The vast majority of malaria deaths occur among young children in Africa, especially in remote rural areas with poor access to health services. Approximately one million deaths among children under five years of age can be attributed to malaria alone or in combination with other diseases.

Mortality is concentrated in the younger age groups. Among children referred to hospitals with severe malaria, case-fatality rates of 10%-30% have been reported. In rural areas with little access to adequate treatment these rates might be even higher. Even in non-fatal cases malaria produces considerable impact on the health of young African children, increasing susceptibility to other infections and hampering development.

Symptoms

In regions where malaria is present, people may be immune (not susceptible to the disease) or semi-immune and be infected with malaria but have few or no symptoms.3 The symptoms of two people with malaria can vary greatly, depending on each person's immunity: one person may be very healthy, the other person may be extremely ill.

Symptoms in the early stages of malaria can be similar to those of many other illnesses caused by bacterial, viral, or parasitic infections. If a person has been in an area where malaria is present (especially in the past 2 months) and the person has symptoms of malaria, then he or she should be suspected of having the disease until tests prove otherwise. Symptoms may include the following:

- Fever (may be periodic)
- Chills
- Headache
- Sweats
- Fatigue
- Nausea and vomiting

Symptoms may appear in cycles. The symptoms may come and go at different intensities and for different lengths of time. However, especially at the beginning of the illness, the symptoms may not follow this typical cyclic pattern.

The cyclic pattern of malaria symptoms is due to the life cycle of malaria parasites and their development as they reproduce and are released from the red blood cells in the human body. This cycle of symptoms is also one of the major indicators that a person is infected with malaria.

Other common signs and symptoms of malaria

Other common signs and symptoms of malaria include:

- Dry (nonproductive) cough.
- Muscle and/or back pain.
- Enlarged spleen.
- Impaired function of the brain or spinal cord, seizures, or unconsciousness (rare).

Infection with the Plasmodium falciparum parasite is usually more serious and may become life-threatening. Symptoms in addition to those listed above include:

- Severe infection of the brain (cerebral malaria), with seizures, confusion, and progressive lethargy leading to coma and death.
- Fluid in the lungs (pulmonary edema).
- Kidney failure (renal failure).
- Severe anemia.
- Blackwater fever (massive destruction of red blood cells, which causes dark-colored urine).

2.6 Diarrhoeal Diseases

In the WHO African region, diarrhoeal diseases are still a leading cause of mortality and morbidity in children under five years of age. It is estimated that each child in the Region has five episodes of diarrhoea per year and that 800,000 die each year from diarrhoea and dehydration. Undernutrition and measles are very commonly associated with this mortality.

The prevention of diarrhoea ultimately depends on the improvement of water supplies and sanitation, which are very expensive but will eventually occur. The prevention of death from dehydration arising from diarrhoea is straightforward, using cheap oral rehydration salts or simple home-made fluids. The skills required by workers in health facilities and by mothers at home are easily learned.

2.7 Measles

Measles is a highly contagious viral infection that causes severe coldlike symptoms, high fever, and a distinct red rash.

Many people have been alarmed by a report published on the Internet that falsely linked the measles, mumps, and rubella (MMR) immunization with autism. Recently, researchers conducted several comprehensive studies and found no connection between the MMR immunization and autism.1

How is it spread?

Measles is transmitted when an infected person coughs or sneezes. The virus is most often spread when people first become ill, before the rash develops, and before they know they have the disease. Measles can be spread from 5 days before the rash breaks out to 4 days after the rash disappears.

Once you have had measles, you cannot get the disease again. Immunizations also protect you from the virus.

Complications of measles

Measles causes more severe symptoms in adults than in children. People usually recover from measles within 2 weeks, although complications can develop. These include ear infection (otitis media) and, in rare cases, pneumonia, strep throat, chronic diarrhea, encephalitis, and optic neuritis. In extremely rare cases, encephalitis can result in permanent brain damage and death.

If a woman gets measles while she is pregnant, the risk of miscarriage or premature birth is increased. However, measles infection does not cause birth defects

People who have impaired immune systems or who have poor nutrition are at a higher risk for complications.

How is it treated, and can it be prevented?

In most cases, people recover from measles with rest and care at home. In complicated cases, hospitalization may be required. The measles vaccine prevents the disease symptoms.

2.8 Pertussis or Whooping Cough

Pertussis is a highly contagious infection caused by bacteria that results in fits of coughing that usually end in a prolonged, high-pitched, deeply indrawn breath (the whoop).

Pertussis remains a major problem throughout the world and half the cases occur in children under age 4. An infected person spreads pertussis organisms into the air in droplets of moisture produced by

coughing. Anyone nearby may inhale these droplets and become infected. A person with pertussis usually isn't contagious after the third week of the illness.

Symptoms begin, on the average, 7 to 10 days after explsure to pertussis bacteria. The infect lasts about 6 weeks, prodgressing through three stages:

- a) mild coldlike symptoms
- b) severe coughing fits
- c) gradual recovery

Doctors have to distinguish between brochitis, influenza, and other viral infections, and perhaps tuberculosis, which have similar symptoms. The doctor takes samples of mucus from teh nose and trhoat with a small swab. The sample is then cultured.

Complications have to do with the airway. Infants are particularly at risk for damage that occurs from lack of oxygen after pauses in breathing (apnea) or coughing fits. Children may develop pneumonia, which can be fatal. During coughing fits, air may be driven out of the lings into the surrounding tissue, or the lungs may rupture and collapse. Severe coughing may result in bleeding in the eyes. A sore may develop under the tongue if the tongue is pushed against the lower teeth during coughing fits. Coughing may cuase an outpouching of the rectum. Bleeding, swelling, or inflammation of the brain may cuase brain damage and mental retardation, paralysis, or other neurologica problems. Ear infections also develop frequently as a result of pertussis.

Treatment

Severely ill infants are hospitalized because they need nursing care and oxygen. They are kept in a darkened, quiet room and are disturbed as little as possible. Cough medicines do not seem to be effective. Intravenous fluids may be given to replace fluids lost during vomiting and because coughing may prevent infants from being able to feed.

Prevention

Immunization is the best prevention against pertussis. The pertussis vacine is usually combined with vaccines for diptheria and tetanus as the DTP (diphtheria-tetanus-pertussis) vaccine.

Chapter 3

Health Education Course, Chapter 3 - First Aid[1]

3.1 Creating and Maintaining a Safe Classroom

A SAFE CLASSROOM:

The best first aid is to avoid setting up dangerous possibilities. Look around your classroom to determine if there are sharp objects or objects hanging loose from walls or the ceiling.

Ensure there is an escape route from the classroom and that the children are not trapped inside.

Run drills in order to practice what children should do should there be an emergency: fire, earthquake, hurricane, tornado, civil unrest

Keep a list of emergency rescue service numbers next to the telephone and in your pocket, wallet or purse.

Have medical supplies and a first-aid kit in your classroom

Identify areas where hazards exist and provide background information

Provide an indication of the extent of the hazard

Delineate some areas of protection needed

Suggest accident procedures to be followed

Suggest a lesson plan(s) in each area so that students are involved in the safety plan.

Help students take responsibility

3.2 Procedures

KEEP CALM. Remaining calm while helping the victim will help he/she to keep calm and cooperate. If the victim becomes anxious or excited the extent of the damage from the injury could be increased.

PLAN QUICKLY WHAT YOU NEED TO DO. Learn basic procedures, or have your first aid manual available, so you can care for the victim.

SEND FOR PROFESSIONAL HELP. Reaching help quickly could save a life. Know your local emergency telephone numbers.

BE AN ENCOURAGEMENT TO THE INJURED PERSON. Let the victim know that help is on the way and try to make them as comfortable as possible. Showing care and concern for the victim can give them hope during their circumstances.

[1] This content is available online at <http://cnx.org/content/m13330/1.3/>.

3.3 Burns

1. Never put butter or greasy ointments on a burn. They seal heat into the wound and may cause infection.
2. Always seek medical attention, especially if:
   - Burn covers more than one body part
   - Burn is located on any sensitive area of the body (hands, face, feet, etc.)
   - Burn is third degree
   - Burn is caused by chemicals

First Degree Burn:

First degree burns damage the outer layer of skin.

CHARACTERISTICS:

1. redness
2. mild pain
3. swelling

TREATMENT:

1. Immediately submerge the affected part in cold water.
2. Hold it under cold running water, or place cold, wet cloths on it until the pain decreases.
3. Cover with a clean, dry gauze dressing for protection.

Second Degree Burns

Second degree burns go through to the second layer of skin.

CHARACTERISTICS:

1. blisters
2. rough, red skin
3. swelling
4. extreme pain

Treatment

1. Immerse in cold water or have cold, wet cloths applied to it immediately.
2. Gently blot area dry. Do not rub. Rubbing may break the blister, opening it to infection.
3. Cover wound with dry, sterile bandage.
4. If burn is located on arm or leg, keep limb elevated as much as possible.

Second degree burns should heal within a few weeks.

Third Degree Burns

Third degree burns are less painful than second degree burns because the nerve cells in the affected tissue are actually destroyed, but the damage is greater. The burn goes through to the third layer of skin.

CHARACTERISTICS:

1. whitish or charred appearance

TREATMENT:

1. Do not remove any clothing near or at the site of the burn
2. Do not apply cold water or medication to the burn.
3. Place clean, dry cloths (i.e. strips of a clean sheet) over the damaged area.
4. If burns are on arms or legs, keep the limbs elevated above the level of the heart.

5. If victim has burns on face, check frequently to make sure he is not having difficulty breathing.
6. Get victim to a hospital at once.

Chemical Burns:

1. Remove clothing on or near the burn area. Never pull clothing over the head with a chemical burn. You may need to cut the clothing.
2. Wash the area thoroughly with low pressure water for at least 20 minutes.
3. Apply a clean dressing to the area.
4. Get medical attention as soon as possible.

3.4 Cuts and Abrasions

CUTS:

1. Cleanse area thoroughly with soap and warm water, carefully washing away any dirt.
2. Apply direct pressure to wound until bleeding stops.
3. Put sterile bandage on wound.
4. If cut is deep, get to a doctor as quickly as possible.

ABRASIONS (SCRATCHES):

1. Wash thoroughly with soap and warm water.
2. If it bleeds or oozes, bandage it to protect it from infection.

SIGNS OF A INFECTED WOUND:

1. swelling
2. redness
3. pain
4. may cause fever
5. presence of pus

3.5 Dislocations

The most common dislocations occur in the shoulder, elbow, finger, or thumb.

LOOK FOR THESE SIGNS:

1. swelling
2. deformed look
3. pain and tenderness
4. possible discoloration of the affected area

IF A DISLOCATION IS SUSPECTED...

1. Apply a splint to the joint to keep it from moving.
2. Try to keep joint elevated to slow bloodflow to the area
3. A doctor should be contacted to have the bone set back into its socket.

3.6 Fractures

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3.7 Nosebleeds

CAUSES:

1. nose injury
2. strenuous activity
3. high blood pressure
4. exposure to high altitudes
5. blowing your nose too hard

WHAT TO DO IF A CHILD GETS A NOSEBLEED:

1. have him/her down
2. Lean slightly forward to prevent blood from running into the throat.
3. Place cold, wet cloths on your nose to constrict the blood vessels in the nose and stop the bleeding.
4. If blood is coming from only one nostril, press firmly at the top of that nostril.
5. If both nostrils are bleeding, pinch nostrils together for at leat 10 minutes.
6. If bleeing continues, apply pressure for another 10 minutes.
7. If the bleeding is the result of direct injury to the nose, only gentle pressure should be applied.
8. If heavy bleeding persists or if nosebleeds recur frequently, consult a physician.

3.8 Poisoning from Plants and Chemicals

From Plants

POISON IVY, POISON OAK, AND POISON SUMAC

Make certain that the irritation is from a plant rather than an animal or fire. Please ask the child questions!

SIGNS:

1. rash
2. blistering
3. swelling
4. burning
5. itching

TREATMENT:

1. Remove any contaminated clothing.
2. Wash the affected area of skin thoroughly with soap and cool water to remove any poisonous residue. Be sure the water used to clean the area does not spread poison by running over other parts of your body. Using a washcloth could also spread the poison.
3. Rinse the area with rubbing alcohol.
4. Apply calamine lotion to the area to relieve itching and burning.
5. If the victim develops a fever for several days or experiences an excessive amount of inflammation, irritation, oozing, or itching, he/she should be treated by a doctor.

From Chemicals

If a child has swallowed poison, do not try to make the child vomit as this may make the child more ill.

If poison is on the child's skin or clothes, remove the clothing and pour large amounts of water over the skin. Wash the skin thoroughly several times with soap.

If a child gets poison in her or his eyes, splash clean water in the eyes for at least 10 minutes.

Take the child immediately to a health centre or hospital. If possible, bring a sample of the poison or medicine or its container with you. Keep the child as still and quiet as possible.

3.9 Strains and Spains

SIGNS OF A STRAIN:

1. affected joint begins to swell immediately
2. joint may also turn black and blue due to the escaped blood from torn blood vessels
3. victim will experience excruciating, shooting pains at the time of the injury because many nerves are injured in a sprain

TREATMENT:

1. RICE treatment
   - REST–Avoid using the affected part to avoid further discomfort or injury. Gradually rebuild your exercise program once the injury has healed.
   - ICE–Apply ice (bags with crushed ice, cold packs, etc.) to the injured area for the first 24 to 48 hours to prevent or reduce swelling.
   - COMPRESSION–Wrap an elastic bandage around the injured area to secure the ice in place. Do not wrap it so tightly that the circulation is cut off. After 10-15 minutes, loosen the bandage and remove the ice. Ice may be reapplied for 15-20 minutes every one or two hours for the first six hours after the injury. As long as the injury is swelling, continue to apply ice 3-4 times a day.
   - ELEVATION–Elevate the injured area above the level of the heart to slow the bloodflow to the injury.
2. Thermotherapy (applying moist heat) promotes healing but should not be applied to a muscle or ligament injury for at least 24 hours because heat will increase the swelling. After the swelling has gone, you should alternate applying cold compresses and moist heat to the injury.
3. To treat the injury with warm, wet packs, place a water-dampened towel in a microwave oven for about 30 seconds. Check to make sure the towel is not too hot before placing it on the skin. If a microwave oven is not available, run a towel under very hot tap water, wring it out, and apply it to the injury.
4. A sprained arm should be placed in a sling.

Most sprains take at least 6-8 weeks to heal.

DIFFERENCE IN SPRAINS AND STRAINS:

- SPRAIN–involves injury to the ligaments around a joint
- STRAIN–involves injury to a muscle or tendon

TREATMENT:

1. At the time of the injury, begin the RICE treatment.
2. For lower back strain, rest will often bring relief to the strained muscle. If not, alternate cold compresses with moist heat, allowing a time of rest between the treatments.

3.10 Asphyxiation

Asphyxiation is a loss of consciousness due to the presence of too little oxygen or too much carbon dioxide in the blood. The victim may stop breathing for a number of reasons (i.e. drowning, electric shock, heart failure, poisoning, or suffocation). The flow of oxygen throughout the body stops within a matter of minutes if a person's respiratory system fails. Heart failure, brain damage, and eventual death will result if the victim's breathing cannot be restarted.

RESCUE BREATHING

RESPIRATORY RESTORATION

A person suffering from asphyxiation should be given rescue breathing. Before you begin rescue breathing, be certain that the victim has actually stopped breathing.

1. Kneel beside the victim, place your ear near his nose and mouth, and watch his chest carefully. You should feel and hear the breaths and see his chest rise and fall if he is breathing.

IF HE IS NOT BREATHING...

1. Provide an open airway. Carefully place the victim on his back and open his mouth. If any material is blocking the airway, it must be cleared out.
2. Tilt the victim's head back by placing the heel of one hand on his forehead and the other hand under the bony part of his chin to lift it slightly.
3. Straddle his thighs, placing one palm slightly above the navel but well below the breastbone. Cover this hand with the other and interlace the fingers.
4. Without bending your elbows, press sharply on the victim's abdomen 6-10 times.
5. Turn the victim's head to one side and sweep out any contents in his mouth with your fingers.
6. If the victim's breathing is not restored after removing the object, reposition his head in the head-tilt/chin-lift position and continue breathing for him as long as is necessary or until help arrives.
7. If there are no signs of breathing , pinch the victim's nostrils closed. Seal your mouth over the victim's mouth and blow two full breaths. A rising chest indicates that air is reaching the lungs. If the stomach is expanding instead, the victim's neck and jaw are positioned improperly. Gently push on the victim's abdomen with the palm of your hand until the air is expelled, because the extra air in the stomach may cause vomiting.
8. Look, listen, and feel again for signs of breathing. If the victim is still not breathing on his own, contnue blowing into his mouth one breath every five seconds until help arrives.

INFANTS:

If you are working with infants or a small child, position your mouth so that you can blow through the child's nose and mouth at the same time. Give two puffs, using your mouth and cheeks for breathing air into the infant's lungs (to keep from overinflating the lungs). Administer one breath every 3-4 seconds.

3.11 Bleeding

EXTERNAL BLEEDING:

1. Apply direct pressure. Place a clean, folded cloth over the injured area and firmly apply pressure. If blood soaks through, do not remove it. Instead, cover that cloth with another one and continue to apply pressure to the wound for 7-10 minutes. If the bleeding is from the ear, place a clean bandage over the ear, lay the victim on his side, and allow the blood to drain out through the bandage.
2. Elevate the injury. Position the wounded part of the body above the level of the heart if possible while you apply direct pressure.
3. Know the pressure points. If direct pressure and elevation do not sufficiently slow the bloodflow, find a pressure point. Large arteries found close to the skin's surface supply blood to the head and to each arm and leg. The most common pressure points used during first aid are located in the upper arms and in the creases above the upper legs. Apply pressure to the closest pressure point to the wound so that the artery is pressed between your fingers and the bone directly behind the artery. If using the pressure point on a leg, you may need to use the heel of your hand instead of your finger.
4. Resort to a tourniquet. On very rare occasions everything listed above may fail. To prevent the victim from dying, you should apply a tourniquet. Once a tourniquet is applied, it should not be loosened or removed until the victim has reached medical help. Use a tourniquet ONLY if everything listed above has failed. If you use a tourniquet, write down somewhere on the victim the time it was applied, so medical personnel wil know how long it has been in place.

INTERNAL BLEEDING:

Internal bleeding results when blood vessels rupture, allowing blood to leak into body cavities. It could be a result of a direct blow to the body, a fracture, a sprain, or a bleeding ulcer. If a victim receives an injury

to the chest or abdomen, internal bleeding should be suspected. He will probably feel pain and tenderness in the affected area.

Other symptoms to watch for:

1. cold, clammy skin
2. pale face and lips
3. weakness or fainting
4. dizziness
5. nausea
6. thirstiness
7. rapid, weak, irregular pulse
8. shortness of breath
9. dilated pupils
10. swelling or bruising at the site of injury

The more symptoms that are experienced, the more extensive the internal bleeding is.

WHAT TO DO FOR THE VICTIM:

1. Check for an open airway and begin rescue breathing if necessary.
2. Call for medical help as soon as possible and keep the victim comfortable until help arrives.
3. The victim may rinse his mouth with water, but DO NOT give a victim of internal bleeding anything to drink.

3.12 Convulsions

A convulsion (violent, involuntary contraction or muscle spasm) can be caused by epilepsy or sudden illness. Convulsion, or seizures, are not likely to cause death unless the victim stops breathing. The victim should be check by medical personnel.

SYMPTOMS:

1. victim's muscles become stiff and hard, followed by jerking movements
2. he may bite his tongue or stop breathing
3. face and lips may turn a bluish color
4. may drool excessively or foam at the mouth

WHAT TO DO:

1. Clear all objects away from the victim and place something soft under his head
2. Do not place anything between his teeth or in his mouth
3. Do not give the victim any liquids
4. If the vicitm stops breathing, check to see that the airway is open and begin rescue breathing
5. Stay calm and keep the victim comfortable until help arrives.

Most convulsions are followed by a period of unconsciousness or another convulsion.

3.13 Electric Shock

1. Remove the victim from the source of electricity before you touch him. Either turn off the master switch to disconnect the power, or use a nonmetal, dry object such as a stick to pull the wire or electrical source away from the victim's body.
2. If he is not breathing, begin rescue breathing immediately; a victim whose heart has stopped breathing needs CPR.

3. If the person is unconscious, but is breathing and has a heartbeat, you should place him in the recovery position and monitor his breathing and heart rate until medical help arrives.

3.14 Heatstroke

1. Cool the body of a heatstroke victim immediately.
2. If possible, put him in cool water; wrap him in cool wet clothes; or sponge his skin with cool water, rubbing alcohol, ice, or cold packs.
3. Once the victim's temperature drops to about 101 F, you may lay him in the recovery position in a cool room.
4. If the temperature begins to rise again, you will need to repeat the cooling process.
5. If he/she is able to drink, you may give him some water.
6. DO NOT GIVE A HEATSTROKE VICTIM ANY KIND OF MEDICATION.
7. You should watch for signs of shock while waiting for medical attention.

3.15 Choking

If you are working with infants and children, ensure that you keep marbles, beads, thumbtacks, and other small objects out of their reach and prevent them from walking, running, or playing with food or toys in their mouths.

If you observe a "conscious" child choking:

- -Ask, "Are you choking?"
- -If the victim can speak, cough, or breathe, DO NOT INTERFERE.
- -If the victim CANNOT speak, cough, or breathe, give subdiaphragmatic abdominal thrusts (the Heimlich maneuver) until the foreign body is expelled or the victim becomes unconscious. (Or in case of extreme obesity or late pregnancy, give chest thrusts.)

The Heimlich Maneuver for CHOKING

A choking victim can't speak or breathe and needs your help immediately. Follow these steps to help a choking victim:

- From behind, wrap your arms around the victim's waist.
- Make a fist and place the thumb side of your fist against the victim's upper abdomen, below the ribcage and above the navel.
- Grasp your fist with your other hand and press into their upper abdomen with a quick upward thrust. Do not squeeze the ribcage; confine the force of the thrust to your hands.
- Repeat until object is expelled.

UNCONSCIOUS VICTIM, OR WHEN RESCUER CAN'T REACH AROUND VICTIM:

- Place the victim on back. Facing the victim, kneel astride the victim's hips. With one of your hands on top of the other, place the heel of your bottom hand on the upper abdomen below the rib cage and above the navel. Use your body weight to press into the victim's upper abdomen with a quick upward thrust. Repeat until object is expelled. If the Victim has not recovered, proceed with CPR.
- The Victim should see a physician immediately after rescue.
- Don't slap the victim's back. (This could make matters worse.)

The Heimlich Maneuver for CHOKING INFANTS

A choking victim can't speak or breathe and needs your help immediately.

Follow these steps to help a choking infant:

An infant or child can choke on food or toys that are small enough to enter the windpipe. If your child has swallowed something but can breathe and is able to cough or speak, it is best not to interfere because he or she will likely cough it out. If your child cannot breathe, cough or speak, take immediate action. Call 911 for help and then start treatment. The method of treatment varies with the child's age:

For an infant (younger than 1 year):

- Place the baby's face down on your lap with the head lower than the body.
- With the heel of your hand, hit your baby high between the shoulder blades four times.
- If the object does not come out, turn your baby over and compress (push on) the chest over the breast bone four times.
- If your child is still not breathing, open the mouth to see if you can remove the object with your finger.
- Try mouth-to-mouth breathing, and keep repeating this whole process until help arrives.
- For an older, larger child (older than 1 year), use the Heimlich maneuver to try and remove a foreign object:
- Put the child on his back on the floor or a table.
- Place the heel of one hand between his belly button and the breast bone in the middle of his abdomen. Put your other hand on top of the first hand and press inward and upward six to 10 times in rapid succession.
- Check the child's mouth quickly for the object, and try to remove it if it is visible.
- Try mouth-to-mouth breathing and then repeat the Heimlich maneuver. Keep trying until help arrives.
- The Heimlich maneuver can be done on a very large child in the standing or sitting position (from behind).

If the Victim Becomes Unconscious:

-Position victim on back, arms by side.

-Call out "Help!", or if others respond, call 911.

-Perform tongue-jaw lift and finger sweep to try to remove the foreign body.

-Open airway (head-tilt/chin-lift), and attempt rescue breathing.

-If unsuccessful, give 6-10 subdiaphragmatic abdominal thrusts (the Heimlich maneuver).

-Repeat sequence: perform finger sweep, open the airway, attempt rescue breathing, perform abdominal thrusts – until successful.

-After obstruction is removed, begin the ABC's of CPR if necessary.

-BE PERSISTENT. Continue uninterrupted until obstruction is relieved or advanced life support is available. When successful, have the victim examined by a physician as soon as possible.

3.16 Teeth Knocked Out

Treatment: If your child's baby tooth has been knocked out because of an accident, leave the tooth out. Baby teeth are not put back into place (reimplanted) because it may damage the permanent tooth that is forming.

If your child's permanent tooth is knocked out, quick action is needed to give the tooth its best chance of successfully being reimplanted. Here are the steps needed:

- Look for the tooth and pick it up by its crown (the white part), not the root.
- Carefully rinse the tooth with water. Remember to put the stopper into the sink! Do not scrub the root or you may remove important tissue that will be needed for the tooth to reconnect to the bone and gums.
- If possible, place the tooth into its socket. If that is not possible, keep the tooth moist in a glass of milk or water.
- Transport your child and the tooth to your dentist immediately. Your dentist will reimplant the tooth and put on a splint to anchor it in place. Teeth have the best chance of reattaching if they are reimplanted within an hour of being knocked out.

Chapter 4

Health Education Course, Chapter 4 - Childhood Psychological and Emotional Health[1]

4.1 Physical and Psychological Abuse

The **Merck Manual** defines physical abuse involves the physical battery of a child. Emotional abuse involves the emotional or mental battery of a child, which often damages the child's emotional growth and self-esteem. Sexual abuse or molestation includes exposure, genital manipulation, sodomy, fellatio, and coitus. Vaginal penetration by an unrelated person constitutes rape. Often, the adult is a close family friend. If the adult is biologically related, the offense is termed incest. When young children are involved, the offense most often is nonviolent and repetitive and may be concealed within the family. Neglect includes failure to meet a child's basic physical and medical needs, emotional deprivation, and desertion.

Abuse: Generally, abuse is caused by the breakdown of impulse control in the parent or guardian. Four contributing factors are recognized:

Parental personality features: The childhood experience of the parent may have lacked affection and warmth, often included abuse, and was not conducive to the development of adequate self-esteem or emotional maturity. Lacking an early loving environment, abusive parents may look toward their children as a source of the affection and support they never received. As a result, they may have unrealistic expectations of what their child can supply for them; they are frustrated easily and lose control, unable to give what they never experienced. Drug or alcohol use may provoke impulsive and uncontrolled behaviors toward the child. Less commonly, a parent may be frankly psychotic.

A "difficult" child: Irritable, demanding, or hyperactive children may provoke parents' tempers, as may a handicapped child, who often is more dependent for care. Premature or sick infants separated from parents early in infancy and biologically unrelated children (eg, stepchildren) may not form strong emotional ties with their parents or guardians. Even in the absence of these conditions, parents may have unrealistic expectations of what a child's performance should be and may punish him severely with little justification.

Inadequate support: Parents may feel isolated, unprotected, and vulnerable without the physical and psychologic support of relatives, friends, neighbors, or peers, particularly in times of stress.

A crisis: Situational stress may precipitate abuse, particularly when support is unavailable.

Neglect: Often, neglect is seen among families with physical, psychologic, or substance abuse problems. Acute or chronic depression, especially maternal, is often present; chronic medical problems of a parent may also contribute. Drug or alcohol abuse by one or both parents frequently results in chronic impoverishment and a distortion of priorities in family life. Desertion by the father, himself inadequate, unable or unwilling

[1] This content is available online at <http://cnx.org/content/m13331/1.3/>.

to assert a controlling influence in the family, may precipitate neglect. Children of cocaine-using mothers are particularly at risk for desertion.

Manifestations of Abuse

History: Features suggestive of abuse are (1) parental reluctance to give a history of injury; (2) a history that may be inconsistent with the apparent stage of resolution of the injury and may vary depending on the information source; (3) a history of injury that is incompatible with the child's developmental capability; (4) an inappropriate response by the parents to the severity of the injury; and (5) delay in reporting the injury.

Physical: Common signs are skin lesions, such as ecchymoses, hematomas, burns, welts, and abrasions in various stages of development (eg, cigarette burns, arcuate bruises from extension cord whipping, symmetric scald burns of upper or lower extremities); serious traumatic injury to the mouth, eye, abdominal organs, and CNS, which may produce permanent damage; and fractures. Fractures may be single or multiple, and a skeletal survey may show bony injuries in various stages of resolution. Metaphyseal fractures and subperiosteal elevations in long bones occur in infants. Major diagnostic considerations in the examination are (1) multiple injuries at different stages of resolution or development; (2) cutaneous lesions specific for particular sources of injury; and (3) repeated injury, which is suggestive of abuse or inadequate supervision.

Physical signs of sexual abuse may include difficulty in walking or sitting, genital trauma, vaginal discharge or pruritus, recurrent UTIs, or a sexually transmitted infection. However, there may be no physical indications of injury. Sexually transmitted disease of any sort in any child $<$ 12 or 13 yr must be viewed as the result of sexual molestation until ruled out.

Emotional: Emotional manifestations of abuse are less easily defined than are physical signs. In infants, failure to thrive is a common early observation. Delayed development of social and language skills often results from inadequate parental stimulation and interaction. Small children may be distrustful, superficial in interpersonal relationships, passive, and overly concerned with pleasing adults. The emotional impact on children usually becomes obvious at school age, when difficulties develop in forming relationships with teachers and peers. Often, emotional effects can be documented only after the child has been placed in another environment, at which time aberrant behaviors abate.

When a child has been sexually abused, his behavior (eg, irritability, fearfulness, insomnia) may be the only clue for diagnosis. Careful interviewing of the child by a trained professional may be the only means of adding necessary details. Older children may be threatened with physical injury by the offender if they tell and, thus, may conceal repeated assaults.

Manifestations of Neglect

Malnutrition, fatigue, and lack of hygiene or appropriate clothing are common due to inadequate provision of food, clothing, or shelter, despite available supportive community resources. Desertion or death by starvation is seen in extreme cases. As many as 1/2 of infantile failure-to-thrive cases may be due to neglect.

In early infancy, retardation of emotional growth may occur with blunting of affect and lack of interest in the environment. This commonly accompanies failure to thrive and is often misdiagnosed as mental retardation or physical illness. Signs of emotional deprivation in older children include poor attendance and performance at school and bad relationships with peers and adults.

Failure to seek preventive medical or dental attention, such as immunizations and routine health supervision, and delay in seeking care for illness may be clues to inadequate family functioning.

4.2 Items to Consider

Checklist for Emotionally-Safe Classrooms -by Jane Bluestein, Ph.D.

Excerpted from Dr. Bluestein's latest book, Creating Emotionally Safe Schools (Deerfield Beach, FL: Health Communications, Inc., 2001) due out in August of 2001.

Survey:

Is your School an Emotionally Safe Place?

This survey lists a number of practices which characterize a school with an emotionally safe climate. It has been included to help you evaluate your school's goals, policies and intentions, as well as the degree to which each exists in actual practice. The list is deliberately idealistic and comprehensive. Studies suggest

that each item is an important component of an emotionally safe school environment, and that emotional safety is built on a combination of all of the characteristics listed in this survey. As schools strive to achieve the specific behaviors each item suggests, they will no doubt see improvements in the culture of the school, as well as in the performance, commitment, behavior and interactions that occur within its walls. Likewise, as schools increase the agreement with each of the items in this survey, they can expect a reduction of stress commonly associated with failure, rebelliousness, disruptiveness and passive student behavior.

You may wish to use this survey to evaluate the degree to which your school is committed to each item in terms of its philosophy or vision, as well as the degree to which the behaviors described in each item regularly occur in actual practice. You can rate each item for an individual classroom, or according to your perception of the school environment as a whole.

Use the following scale to rate each item:

1- Strongly Agree

2- Somewhat Agree

3- Somewhat disagree

4- Strongly disagree

Need for Meaningful Outcomes (Positive Consequences), Structure, Boundaries (Limits) and Follow-Through

___ We make a deliberate effort to anticipate what students and teachers (and parents) will need in various situations in order to prevent problems from occurring.

___ We have and communicate boundaries and policies that clearly describe desirable and acceptable student behaviors.

___ We have and communicate boundaries and policies that clearly describe desirable and acceptable staff behaviors.

___ The school environment is reward oriented (as opposed to being punishment oriented): Rules and boundaries emphasize the positive consequences of cooperation and compliance.

___ Our goal is to motivate through access to positive outcomes, rather than through avoidance or fear of negative outcomes.

___ We attempt to motivate students with the promise of a positive outcome, rather than using statements that offer conditional approval or safety (avoidance of disapproval, punishment) for cooperation (threats).

___ We attempt to follow through consistently, withholding (or withdrawing) positive outcomes until students follow through on what is required on their end.

___ We are committed to avoiding warnings, threats, meaningless or delayed (negative) consequences.

___ We make students and their parents aware, as soon as possible, of changes in behavior or performance that could affect grades, promotion or graduation.

___ We communicate with parents on a regular basis about what their kids are doing well.

Need for Respect, Belonging and Dignity

___ We attempt to avoid equating students' worth with their behavior or achievement.

___ We attempt to avoid humiliation, shaming, sarcasm, ridicule or other forms of attack with regard to students' personality, achievement or behavior.

___ We attempt to avoid depending on negative adult reactions (anger, punishment, disappointment) in order to motivate students (or control their behavior).

___ We recognize that students have a need to experience meaningful positive outcomes, just as adults do.

___ We treat our students with the same respect we want them to show us and one another.

___ We recognize that our students have a need for dignity, purpose, success, impact (seeing outcomes of choices and behaviors), acceptance, belonging, attention, structure, power and fun, among other things.

___ We encourage students to have and voice their own thoughts and opinions.

___ We encourage students to speak up for their own instructional needs (for example, more help, additional information or resources, clarification, other learning needs).

___ We encourage inquiry and debate, and attempt to avoid negatively reacting to students who challenge or disagree with adults (although we do ask students to present their positions respectfully).

___ We attempt to adhere to the same standards of behavior (including language and tone of voice) that we expect or require from our students.

___ We regard-and use-a students' mistakes simply as opportunities for new learning.

___ We avoid responding with impatience, anger or disappointment to a student who is having difficulty understanding or mastering a new concept or performing a new skill.

___ We respect students' affective needs and are committed to listening and supporting their feelings in positive ways.

___ We work to eliminate prejudices toward students based on their racial or cultural background, physical appearance; academic, artistic or athletic competence; sexual orientation; family history; prior achievement or performance.

___ We avoid gossiping about students or their families.

___ We strive to stay aware of put-downs expressed by students or staff, especially those that involve the use of slurs or derogatory names or remarks.

___ We respond immediately to put-downs, slurs and derogatory names or remarks (rather than ignoring or excusing them).

Need for Autonomy (Power and Control)

___ We accept the importance of students learning decision-making and self-management skills.

___ We encourage kids to set goals and evaluate options in order to take responsibility for solving their own problems, rather than "rescuing" them or telling them what they should do.

___ We allow students to self-manage with regard to materials and resources.

___ We encourage students to self-manage their personal needs within clearly stated boundaries (ex: drinking water or using the rest rooms as needed)

___ We allow and encourage students to have input in and make decisions about their learning (topics, presentation, media, sequence, assignments, need for additional practice, readiness for the next skill or topic, etc.)

___ We allow and encourage students to have input in and make decisions about how, where and with whom they work.

___ We hold students accountable for their behavioral choices without blaming, shaming, attacking or punishing (ex: withholding positive outcome, privileges, credit for work due)

___ Students are encouraged to initiate and take risks regarding their own learning.

___ We allow and encourage students to create, design, request or renegotiate projects and assignments to make them personally meaningful and relevant.

Need for Recognition, Attention and Emotional Safety

___ We attempt to recognize positive behavior with statements that emphasize a positive outcome or meaningful benefit to the students, rather than using statements that emphasize the students' worth ("goodness"), our happiness or pleasure, or the students' ability to please us.

___ We attempt to reinforce positive behavior by allowing positive outcomes to occur, continue or become available, contingent, for example, on work completion or non-disruptive behavior.

___ We attempt to meet students' needs for attention in positive, constructive and proactive ways in order to diminish the tendency for them to act out to get these needs met.

___ We strive to stay aware of changes in patterns in students' behavior and to maintain a sense of how students are doing (that is, not just focusing on their academic performance).

___ We attempt to create emotional safety by noticing and supporting students in crisis.

___ We provide appropriate outlets for students in crisis.

___ Our students know that if they need to talk, we are willing to listen (or set a time when we can listen, or refer them to someone who can listen).

___ We respect students' needs for confidentiality to the degree that doing so will not put that student or anyone else in danger.

___ We strive to maintain awareness of how students treat one another.

___ We immediately respond to incidents we witness that involve any form of bullying, harrassment or threat to a student's safety.

Need for Options as a Learner (Individuality)

___ We attempt to determine what interests and motivates our students and use this information in our planning and instruction.

___ We attempt to identify various aspects of our students' individual learning needs (such as learning styles, modality preferences, dominance profiles, temperament or personality profiles), and use this information in our planning and instruction.

___ We attempt to identify various types of intelligences (linguistic, musical, logical-mathematical, spatial, bodily-kinesthetic, naturalistic, interpersonal and intrapersonal) and use this information to capitalize and build on students' strengths.

___ We provide resources and activities to accommodate a variety of intelligences in each class.

___ We attempt to accommodate a variety of modality strengths (visual, auditory, tactile and kinesthetic preferences) in our directions and activities.

___ We attempt to accommodate a variety of learning style and preferences in our instruction and assignments.

___ We recognize and attempt to accommodate the needs of tactile and kinesthetic learners (as well as high visual, verbal and auditory learners).

___ We acknowledge and appreciate the fact that some students may pay attention without sitting up straight and making continual eye contact.

___ We make sure kids have ample opportunities to move during the day.

___ We teach children ways to self-regulate (maintain appropriate alertness for the particular class or activity) without disrupting others.

___ We attempt to accommodate a variety of learning preferences by offering choices, particularly during independent work time (ex: seating or location in room, affiliation, music or sound, intake, etc.)

___ We offer a variety of assessment tools to allow students to demonstrate mastery in ways besides paper-and-pencil tests.

Need for Success (Academic, Social, Intrapersonal)

___ We assess student ability before beginning instruction or assigning tasks.

___ We attempt to accept students exactly the way they come to us, build on what they know, and encourage growth from wherever they start.

___ We attempt to provide opportunities for success for each child in the school, even if he or she is far behind curricular expectations.

___ We attempt to match instruction and assignments to individual student needs according to their current skill or mastery levels or prior experience.

___ We have adopted the belief that the primary purpose of evaluating a student's work is to determine what type of instruction or resources that particular student needs next.

___ We invite and consider student input and self-assessment when assigning placement, follow-up work or grades.

___ If a student fails to master a concept or skill, we see our role as that of improving understanding, rather than simply evaluating their performance before moving on to the next concept.

___ We encourage students to use our feedback to improve their work and resubmit (for a higher grade, for example, or until they get it right).

___ We attempt to build interpersonal skills such as communication skills, respect, tolerance, compassion, resistance to teasing and peer pressure, and other positive social behaviors.

___ We attempt to build intrapersonal (character) skills such as persistence, responsibility, honesty, integrity, as well as confidence, the ability to stick up for oneself, problem-solving skills and resistance to failure, defeatism or victim thinking.

Areas of greatest strengths:

Areas most in need of improvements:

Chapter 5

Health Education Course, Chapter 5 - Introduction[1]

5.1 Health for Children

PART I of this course focuses on health for children - in non-formal and formal settings. The sections of this course are organized under the following criteria:

- Prevention Education
- Children and Disease
- First Aid
- Childhood Psychological and Emotional Health
- Creating Healthy Schools

5.2 Where There Is No Doctor

Part II of this course is made possible by the extraordinary talents and resources of The Hesperian Foundation (1919 Addison Street, Suite 304; Berkeley, California 94704 - U.S.A.). All of the materials come from their book, **Where There is no Doctor: A Village Health Care Handbook**. The authors are David Werner, with Carol Thuman and Jane Maxwell. The book is published by MacMillan, co. 1980.

The first page of their book outlines the conditions on which it is to be used:

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IN SHORT, WE ARE HERE TO HELP. THAT IS THE SPIRIT OF OUR ORGANIZATION.

[1] This content is available online at <http://cnx.org/content/m13332/1.3/>.

Chapter 6

Health Education Course, Chapter 6 - PART II: WHERE THERE IS NO DOCTOR[1]

6.1 Home Cures, Confusing Sicknesses, and Examining Sick People

Click on the PDF file below to see the Contents of Chapters 1-3, focusing on:

Chapter 1. Home Cures and Popular Beliefs
Home Cures and Popular Beliefs [2]
Chapter 2. Sicknesses that are Often Confused
Sicknesses that are Often Confused[3]
Chapter 3. How to Examine a Sick Person
Chapter 3. How to Examine a Sick Person[4]

6.2 Taking Care of the Sick and the Use/Misuse of Medicines

These six chapters are divided up into the following:

- Chapter 4: How to Take Care of a Sick Person
- Chapter 5: Healing Without Medicines
- Chapter 6: Right and Wrong Use of Modern Medicines
- Chapter 7: Antibiotics: What They Are and How to Use Them
- Chapter 8: How to Measure and Give Medicine
- Chapter 9: Instructions and Precautions for Injections

6.3 First Aid, Nutrition, and Prevention

Chapters 10-12 are devoted to the following:

- Chapter 10: First Aid
- Chapter 11: Nutrition: What to Eat to be Healthy
- Chapter 12: Prevention: How to Avoid Many Sicknesses

[1] This content is available online at <http://cnx.org/content/m13333/1.3/>.
[2] http://cnx.org/content/m13333/latest/file:ch1homecures.pdf
[3] http://cnx.org/content/m13333/latest/file:sicknessesconfused.pdf
[4] http://cnx.org/content/m13333/latest/file:howtoexamine.pdf

6.4 Common Sicknesses, Serious Illnesses, Skin Problems

Contents of Chapters 13-15 include the following:

- Chapter 13: Some Very Common Sicknesses
- Chapter: 14: Serious Illnesses that Need Special Medical Attention
- Chapter 15: Skin Problems

6.5 The Eyes, Teeth, Gums, Mouth, Urinary System, and Information for Mothers and Midwives

These chapters include the following:

- Chapter 16: The Eyes
- Chapter 17: The Teeth, Gums,and Mouth
- Chapter 18: The Urinary System and the Genitals
- Chapter 19: Information for Mothers and Midwives

  NOTE: More of Chapter 19 is included in the next section

6.6 Family Planning and Health/Sicknesses of Children

Chapters 20 and 21 include the following:

- Chapter 20: Family Planning - Having the Number of Children You Want
- Chapter 21: Health and Sicknesses of Children

6.7 The Elderly, The Medicine Kit, Important Tables, New Information, Vocabulary, and INDEX

This final section is just about the most important:

- Chapter 22: Health and Sicknesses of Older People
- Chapter 23: The Medicine Kit
- Chapter 24: The Green Pages - The Uses, Dosage, and Precautions for Medicines
- The Blue Pages: New Information (Extensive offerings including AIDS, special care for babies, ear wax, Leishmaniasis, Guinea worm, emergencies caused by cold, measuring blood pressure, poisoning, complications from abortion, drug abuse and addiction)

Chapter 7

Health Education Course, Chapter 7 - Creating Healthy Schools[1]

7.1 Four Recommendations for Healthy Schools

Policies, Provisions, Skill-Based Health Education, Nutrition

Health-related school policies

Health policies in schools, including skills-based health education and the provision of some health services, can help promote the overall health, hygiene and nutrition of children. But good health policies should go beyond this to ensure a safe and secure physical environment and a positive psycho-social environment, and should address issues such as abuse of students, sexual harassment, school violence, and bullying. By guaranteeing the further education of pregnant school girls and young mothers, school health policies will help promote inclusion and equity in the school environment. Policies that help to prevent and reduce harassment by other students and even by teachers, also help to fight against reasons that girls withdraw or are withdrawn from schools. Policies regarding the health-related practices of teachers and students can reinforce health education: teachers can act as positive role models for their students, for example, by not smoking in school. The process of developing and agreeing upon policies draws attention to these issues. The policies are best developed by involving many levels, including the national level, and teachers, children, and parents at the school level.

Provision of safe water and sanitation - the essential first steps towards a healthy physical, learning environment

The school environment may damage the health and nutritional status of school children, particularly if it increases their exposure to hazards such as infectious disease carried by the water supply. Hygiene education is meaningless without clean water and adequate sanitation facilities. A realistic goal in most countries is to ensure that all schools have access to clean water and sanitation. By providing these facilities, schools can reinforce the health and hygiene messages, and act as an example to both students and the wider community. This in turn can lead to a demand for similar facilities from the community. Sound construction policies will help ensure that facilities address issues such as gender access and privacy. Separate facilities for girls, particularly adolescent girls, are an important contributing factor to reducing dropout at menses and even before. Sound maintenance policies will help ensure the continuing safe use of these facilities.

Skills-based health education

This approach to health, hygiene and nutrition education focuses upon the development of knowledge, attitudes, values, and life skills needed to make and act on the most appropriate and positive health-related decisions. Health in this context extends beyond physical health to include psycho-social and environmental health issues. Changes in social and behavioural factors have given greater prominence to such health-

[1] This content is available online at <http://cnx.org/content/m13334/1.3/>.

related issues as HIV/AIDS, early pregnancy, injuries, violence and tobacco and substance use. Unhealthy social and behavioural factors not only influence lifestyles, health and nutrition, but also hinder education opportunities for a growing number of school-aged children and adolescents. The development of attitudes related to gender equity and respect between girls and boys, and the development of specific skills, such as dealing with peer pressure, are central to effective skills-based health education and positive psycho-social environments. When individuals have such skills, they are more likely to adopt and sustain a healthy lifestyle during schooling and for the rest of their lives.

School-based health and nutrition services

Schools can effectively deliver some health and nutritional services provided that the services are simple, safe and familiar, and address problems that are prevalent and recognised as important within the community. If these criteria are met then the community sees that teacher and school more positively, and teachers perceive themselves as playing important roles. For example, micronutrient deficiencies and worm infections may be effectively dealt with by infrequent (six-monthly or annual) oral treatment; changing timing of meals or providing a snack to address short term hunger during school - an important constraint on learning; and providing spectacles will allow some children to fully participate in class for the first time.

7.2 Student Health Awareness

Students Health Awareness

Conduct the following activity with your students in order to get a sense of their awareness about health:

To begin with ask students to name some of the illnesses they have had. Write these down in a list. Then discuss whether or not all of them are infectious diseases and eliminate those that are not. Now you have a first list for the class.

Make sure all students have a copy of that list. Ask students to go home to their parents and ask about childhood diseases they may have had. Each student should write a list of his or her own. For information, these lists may be compared to other lists such as the diseases mentioned in the disease index.

All the individual lists should then be combined into one single class list.

Repeat exactly the same steps for vaccinations. Student vaccination records and health certificates may be brought in to class for comparison.

In addition to the class list, students might want to try and find out from school or city health officials which vaccines are recommneded for children and adults in their region. (The same can be done for diseases: school or city health officials may be able to let you know if there have been recent epidemics or warnings about a infectious specific disease).

The class now has two lists, a vaccination list and an infectious disease list. At the top of each list, write the name of your school, the grade and the location of the school, starting with the country and then the city. Now post the lists on the health curriculum discussion forum so that students from other parts of the world can see your class lists.

Check to see if others have posted their lists (do this periodically as classes may keep on postiong information). Print the lists out and distribute them to the class. Students can also make comments on each others' lists.

Students should then develop a color code for all the vaccines and infectious diseases mentioned on the various lists.

Then get a map of the world (preferably a large black and white one for the class or copies for each student). Students should then color one or two sheets of paper with each of the colors they chose for their color codes. From the colored sheets they should cut out triangular pieces if it represents a specific vaccine and round pieces if it represents an infectious diseases.

Now the class has everything to begin the final phase of the map. Based on the information contained in the lists downloaded from the discussion forum (location, diseases, vaccines), the class can create a basic epidemiological map by sticking the appropriate color on to the right place on the map.

The map could help you draw certain conclusions or it may raise some questions, such as why the vaccination list in one place is different. In that case, the class can go back to the discussion forum to

mention some of the observations or ask questions from other participants.

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