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Dear Child Care Professional:

The Medical Society of Virginia Foundation (MSVF) in partnership with the Virginia Department of Health and funding from Anthem Blue Cross and Blue Shield has developed and assembled educational materials to educate the public about the need to use antibiotics prudently and wisely.

Because childcare providers are often seen as “experts” by parents, the Medical Society of Virginia Foundation is providing critical information that you can share with parents about the dangers of antibiotic misuse. Please use the enclosed materials to educate parents, children and staff in your program about this important public health threat.

The materials in this kit include a newsletter article, parent handouts that you may copy and distribute, and activities for teachers to use with children at your center.

Posters, brochures and other educational materials can be viewed and downloaded at www.msvfoundation.org.

If you have any questions, please contact:

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Cartoon characters appear courtesy of the Wisconsin Antibiotic Resistance Network (WARN). Find the Antibiotics, Get Well Word Find and Antibiotic Word Scramble are adapted from materials ©2002 Arkansas Foundation for Medical Care. All rights reserved. (Used with permission.) “Antibiotic Maze” is the copyrighted property of the Arkansas Foundation for Medical Care, and may not be reproduced, published, broadcast or distributed without express written permission from AFMC.

Background Information

Antibiotic resistance is a growing problem.

Children in child care have an increased rate of respiratory illness and an increased risk of getting antibiotic resistant bacteria. (Clinical Infectious Diseases: Regev-Yochay, March 2004).

Resistant bacteria are bacteria not killed by the usual doses of antibiotics. Resistant bacteria emerge because of antibiotic overuse and misuse. Once bacteria develop resistance to an antibiotic, they can continue to live and/or multiply even in the presence of antibiotic treatment. Prior to 1988, more than 99% of all bacterial infections caused by *Streptococcus Pneumoniae* bacteria, the primary of cause of ear infections, were effectively treated with penicillin. High-level resistance to penicillin was extremely rare just eight years ago. Because of antibiotic overuse, the level of resistant infections in the US has increased to almost 30%. In addition, one-third of those resistant infections are highly resistant, meaning doctors have to use antibiotics normally used for life threatening illness to treat them.

According to the Centers for Disease Control and Prevention (CDC), up to 50% of antibiotic use may be inappropriate. Most of this inappropriate use is for illness due to viruses, which antibiotics cannot cure. Antibiotic resistant bacteria cause infections that are more difficult to treat, result in longer and costlier hospitalizations, and must be treated with stronger antibiotics that may cause serious side effects.

There is not a ready supply of newly created, stronger antibiotics. Pharmaceutical companies say the costs involved make the discovery and creation of new antibiotics a difficult and time-consuming process. It is very important to do what we can to slow resistance now. The best way to do that is to stop inappropriate antibiotic use.

Habits that lead to **inappropriate** antibiotic use include:

- Insisting on a prescription for an antibiotic against your doctor's advice,
- Not taking your prescribed antibiotic for the full course of treatment,
- Using antibiotics without a doctor's care or using leftover antibiotics.

The attached materials have been developed and assembled for physician practices and consumer use to combat antibiotic resistance. The materials and resources are available free of charge.

The goal is to reduce the inappropriate use of antibiotics and inhibit the spread of antibiotic resistance. This will be accomplished through educational efforts geared to healthcare providers who prescribe antibiotics and to the consumers who use them.

Facts about Infections and Children

- Young children average 3-8 viral infections each year, and up to 10 when in child care.
- Yellow or green mucous **does not** mean that a child has a bacterial infection; it is a normal response to a cold.
- Children who frequently take antibiotics are more likely to have resistant bacteria in their nose and throat.
- Ear infections do not always need an antibiotic. Doctors now recommend 'watchful waiting' for fluid in the middle ear. The guidelines "Diagnosis and Management of Otitis Media" are posted on the American Academy of Pediatrics (AAP) and the American Academy of Family Physicians (AAFP) web sites at <http://www.aap.org> and <http://www.aafp.org/x26481.xml>.
- Hand washing is the single most effective way to prevent infections.

Did You Know...?

- Nearly 22 million school days are lost each year to the common cold.
- Bacteria can double in numbers every 20 minutes. This means a single bacterium on a counter can multiply to more than 34 billion in just 12 hours.
- Rhinovirus, the most common cause of colds, can live on surfaces such as, tables, doorknobs and computer keyboards for 2-3 hours.
- Number of germs per square inch:
 - Phone – 25,127
 - Toilet seat -- 49
(this is because we clean a toilet seat much more frequently than a phone).

Sources: The Clorox Company and CDC.

ABC...

What You Should Know About Using Antibiotics

Antibiotics are lifesaving drugs, but they are not always the answer.

Antibiotics have been one of the most important medicines in the war against disease in the last fifty years. The proper use of antibiotics has protected us against infections and illnesses, such as tuberculosis, which in years past caused death and suffering. However, antibiotics are not always the answer.

Bacteria and Viruses

Two types of germs, bacteria and viruses, are the main cause of infections. Viruses cause most coughs, colds, bronchitis and sore throats.

- ❖ Antibiotics do not have any effect against illnesses caused by a virus.
- ❖ **Only illnesses caused by bacteria can be treated with antibiotics.**

PROTECT YOURSELF AND YOUR FAMILY AGAINST DRUG RESISTANT BACTERIA

- Use antibiotics only when your doctor prescribes them.
- Don't share antibiotics with family members.
- When an antibiotic is prescribed, finish the entire prescription.

Careful use prevents drug resistant

bacteria

When we take an antibiotic, the first doses kill off the weaker bacteria, and we begin to feel better. The stronger bacteria continue to survive. If we stop taking the antibiotic before the prescription is finished, the remaining bacteria multiply and become resistant to the antibiotic.

The resistant bacteria can be transmitted to other family members and the community.

When a person is infected with drug resistant bacteria, he or she may need to be treated with a stronger antibiotic and it may take longer to get better. For additional information talk to your healthcare provider.



Cleaning Guidelines

Use these guidelines to decide when and how frequently surfaces need to be cleaned.

Clean means to remove all visible dirt by using a product suitable for that surface.

Disinfect or sanitize means to kill germs by using a disinfectant cleaner like chlorine bleach solution. Remember to disinfect high touch zones such as, flush handles, faucets, table undersides and appliance handles.

EACH USE	Clean	Disinfect	Who is Responsible
Kitchen sink, counter tops, faucets and cutting boards	X	X	
Counters/tabletops before and after each use	X	X	
Diaper changing surface before and after each use	X	X	
Toilet training equipment	X	X	
High chair	X	X	
Rest mats	X		
Mouthed toys before use by another child	X	X	
Utensils, cups and place mats	X	X	
DAILY			
Refrigerator handle	X	X	
Diaper pail and trash containers	X	X	
Toys handled by babies and toddlers. Infant toys should always be washable or able to be laundered	X	X	
Floor mats or rugs where babies play	X		
Playpens and cribs	X	X	
WEEKLY			
Toilet bowl, bath and shower	X	X	
Bathroom and kitchen floor		X	
Toys used by older, non-diapered children	X		
Cubby areas and low shelves	X	X	
Dress-up clothes	X		
Linens and crib sheets	X		

Adapted from California Childcare Health Program

Children's Hand Washing Song

How to wash your hands

1. Use soap and water.

Water alone does not get rid of germs.

2. Wet your hands.

3. Apply liquid soap.

It is not necessary for children to use antibacterial soap.

4. Rub your hands together for at least 20 seconds (the time it takes to sing *Twinkle, Twinkle, Little Star.*)

5. Rinse your hands for 10 seconds.

6. Dry your hands with a paper towel and use the towel to turn off the faucet.

7. Throw the paper towel away.

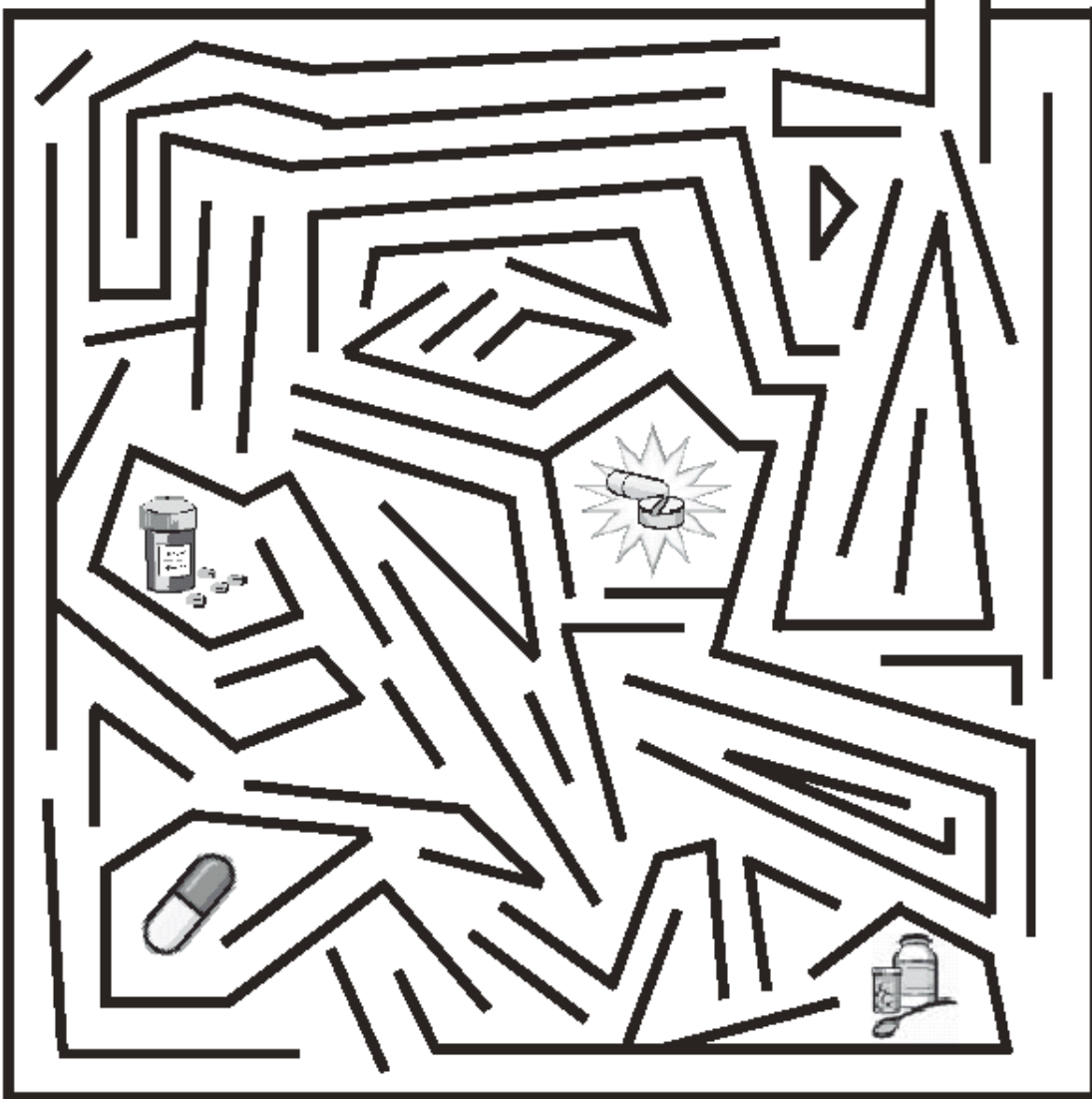
Twinkle, twinkle little star,
Look how clean my two hands are,
Soap and water, wash and scrub
Get those germs off rub-a-dub,
Twinkle, twinkle little star,
Look how clean my two hands are.

Washing your hands keeps infections away!



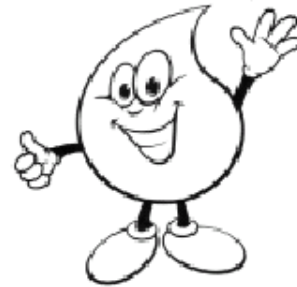
Find the Antibiotics

Billy needs to take all of his medicine to make sure his infection is gone. Help him find all of his antibiotics so he can get well!



Antibiotic Word Scramble

Unscramble the words below and help antibiotics do their job against bacteria (not viruses!).



- 1) DTRCOO _____
- 2) GOHUC _____
- 3) TRICABAE _____
- 4) SLDOC _____
- 5) BATNIIOCIT _____
- 6) LTEAHYH _____
- 7) MERG _____
- 8) KSCI _____
- 9) NCEsisRETA _____
- 10) HAWs ORUY SndAH! _____

Solution: Antibiotic Word Scramble

- | | |
|-------------|----------------------|
| 1. doctor | 5. antibiotic |
| 2. cough | 4. colds |
| 3. bacteria | 9. resistance |
| 6. healthy | 8. sick |
| 7. germ | 10. Wash your hands! |

Invisible Germs

Materials

- White crayons
- White paper
- Prepared color wash brushes

Alternative materials

- White candles can be substituted for crayons.

Directions

- Encourage children to draw bug shapes with the white crayons.
- Ask them to close their eyes while they are drawing, using their imagination to guide them.
- The children will then brush the paper with color wash and discover their Hidden Bugs.

Some Facilitating Comments

- What does it mean to be invisible?
- Aah - too tiny to be seen? No color?
- Ask the children to describe their drawings, keep them focused on the major learning concept below.

Learning Concepts

Germs are invisible

Just because you can't see it doesn't mean it isn't there

Bug Puppets

Materials

- Bacteria and virus shapes
- Brown paper bags
- Assorted collage material
- Geometric shapes
- Colorful buttons
- Googly eyes
- Pipe cleaners
- Feathers
- Glue sticks

Directions

- Allow children to sort through materials to decide what a virus bug would wear and what a bacteria bug would wear.
- Each child chooses either a bacteria or virus shape cutout to paste in the middle of the brown paper bag.
- The children then decorate around the shape using the collage materials.

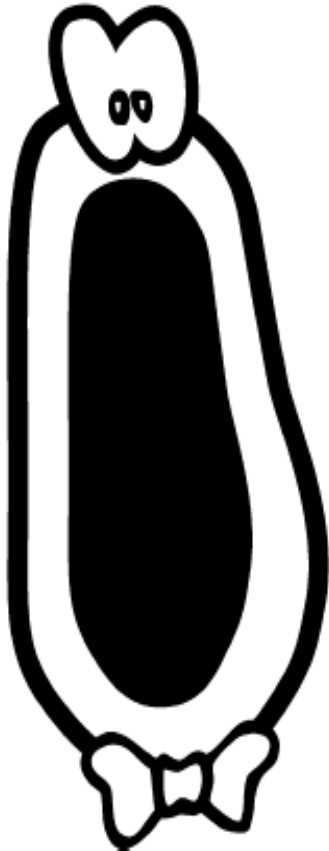
Some Facilitating Comments

- Bugs are all different just like the ones we made.
- Just like real germs.
- Different bugs make us sick in different ways.

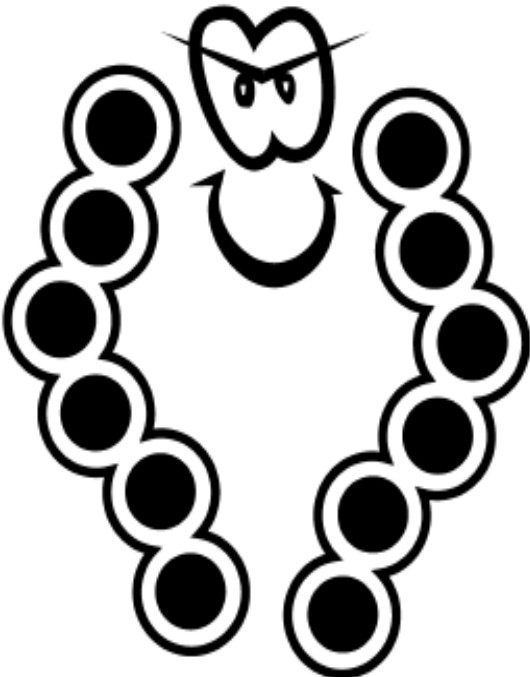
Learning Concepts

- Bacteria and viruses are the two kinds of bugs that make us sick most of the time
- Bacteria and viruses are different

Bacteria



Virus



Antibiotic Resistance Websites

Do Bugs Need Drugs <http://www.dobugsneeddrugs.org/index.html>

The Microbe Zoo <http://commtechlab.msu.edu/sites/dlc-me/zoo/>

Microbes in the News <http://commtechlab.msu.edu/sites/dlc-me/news/news.html>

What Doesn't Kill Them Makes Them Stronger <http://whyfiles.org/038badbugs/>

Centers for Disease Control & Prevention www.cdc.gov/getsmart

Information About the Flu

Centers for Disease Control & Prevention <http://www.cdc.gov/flu/>

Hand Hygiene Websites

Clean Hands Campaign www.washup.org

Henry the Hand www.henrythehand.com

WE WOULD LIKE YOUR FEEDBACK!!!

Was your Center able to use the materials found in this kit?

Yes _____ No _____

If yes, what materials did you use? Circle all that apply.

Newsletter Article

Parent Handouts

Staff Training

Bulletin Board

Student Materials

Were the materials easy to understand and useful?

Yes _____ No _____

Overall, did you find this kit helpful?

Yes _____ No _____

What was the most helpful thing about the kit?

Is there other information about antibiotic resistance that would be useful to you? If yes, please specify.

Name: _____

Center/Location: _____

Please fax this form to Kelly Nagy, 804-377-1056

If you have questions please contact:

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