



OVERVIEW

BIG IDEA

Chronic diseases are preventable.

OBJECTIVE

6.4 Identify risk factors and preventative strategies for reducing chronic disease.

AGENDA

1. Rural vs. Urban Mortality Rates
2. Chronic Disease Terms
3. Chronic Disease Research
4. Health Fair Booth Planning

HOMEWORK

Complete your assigned tasks to prepare a health fair booth on your assigned chronic disease or condition.

LESSON 6.4

Chronic Disease

SUMMARY:

This lesson will give students an opportunity to work cooperatively in a team to create an informational health presentation for a target audience through a health fair booth. Students will learn about chronic disease disparities in rural populations and identify the risk factors and preventive behaviors to reduce their prevalence and impact.

STANDARDS:

NHES 1.12.5: Propose ways to reduce or prevent injuries and health problems.

NHES 8.12.3: Work cooperatively as an advocate for improving personal, family, and community health.

NHES 8.12.4: Adapt health messages and communication techniques to a specific target audience.



MODULE 5: RURAL HEALTH

LESSON 5.4

Chronic Disease

Obj. 5.4: Identify risk factors and preventative strategies for reducing chronic disease.



Rural vs. Urban Mortality Rates

Use the following data table to answer the questions below.

Age-Adjusted Mortality Rates Per 100,000 Females Aged 15 and Older, by Leading Cause of Death and Rural/Urban Residence, * 2009

	Rural Rate (Rank)	Urban Rate (Rank)
Total	868.2 (-)	764.0 (-)
Heart Disease	201.2 (1)	177.3 (2)
Malignant Neoplasms	194.0 (2)	184.7 (1)
Chronic Lower Respiratory Diseases	56.7 (3)	46.0 (4)
Cerebrovascular Disease (Stroke)	56.3 (4)	46.1 (3)
Unintentional Injury	42.1 (5)	27.5 (6)
Alzheimer's Disease	36.2 (6)	31.2 (5)
Diabetes Mellitus	27.1 (7)	21.5 (7)

*Defined as residence in non-metropolitan (rural) and metropolitan (urban) statistical areas; all estimates are age-adjusted.

Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2010 on CDC WONDER online Database, released 2012. Data for year 2010 are compiled from the Multiple Cause of Death File 2010, Series No. 2P, 2012. Retrieved from <http://wonder.cdc.gov/ucd-io.html>

Note: Malignant Neoplasms = Cancer.

1. Which of the causes of death listed are preventable?
2. Which cause of death had the greatest disparity (difference) between rural and urban populations?
3. What are the leading causes of death for urban and rural females, respectively?



Personal Connection

Do you know anyone who has dealt with any of the health issues shown in the data table above?

DO NOW: Answers:

1. All are potentially preventable; yet some have preventable and non-preventable (or less preventable forms.) For example, cancer (malignant neoplasms) are preventable to some degree (ex: avoiding sunburns, not smoking, eating high-fiber diet, preventing sexually transmitted disease HPV, etc. are all behaviors to decrease your risk of cancer, but there is still a large component that is genetic).

2. Heart disease (Urban: 177.3, Rural: 201.2. The difference is 23.9 deaths per 100,000 females)

3. Urban: Cancer; Rural: Heart Disease

Data can be accessed at: <http://www.mchb.hrsa.gov/whusa12/hs/hssp/pages/>

DISCUSS: This may be a sensitive topic for students who themselves are living with a chronic disease or those who have a close family member or friend who is living with one, was recently diagnosed, or deceased from a chronic disease. Create a safe space for students to share or not share (to their degree of comfort) and where all stories, ideas, and experiences will be respected.



Chronic Disease

Write the definitions of each term in the table:

Term	Definition
Chronic disease	
Acute disease	
Communicable disease	
Noncommunicable disease	

Review the *CDC Chronic Disease Fact Sheet*. Use it to fill in the following statistics:

Chronic Disease Rates:

1. ___ out of 10 deaths among Americans each year are from chronic diseases.
2. In 2005, 133 million Americans – almost ___ out of every 2 adults – had at least one chronic illness

Four Common Causes of Chronic Disease:

Four modifiable health risk behaviors— are responsible for much of the illness, suffering, and early death related to chronic diseases. They are:

- (1) _____
- (2) _____
- (3) _____
- (4) _____



Chronic Disease Assignments

Your team will be assigned to one of the following chronic diseases or conditions: (1) *heart disease*, (2) *diabetes*, (3) *cancer*, (4) *hypertension*, (5) *obesity*, (6) *chronic obstructive pulmonary disease*, (7) *stroke*, (8) *arthritis*. Write your disease assignment below:

Our Chronic Disease/Condition: _____

NEW INFO: Ask students for examples of more chronic and acute diseases, and communicable and noncommunicable diseases

NEW INFO:
Chronic disease: A chronic condition develops and worsens over a long period of time. (Ex: heart disease, osteoporosis)
Acute disease: A illness that appears and worsens over a short period of time (Ex: heart attack, broken bone)
Communicable disease: A medical condition or disease that is non-infectious & non-transmissible among people. (another common term for chronic disease)
Noncommunicable disease: A disease that is infectious & transmissible among people.

NEW INFO: The enormity of this problem should not be lost on students. To really driving it home, remind them that 7 out of 10 of you (or possible more, given the direction obesity and other conditions are going in our country) will die of these causes.

NEW INFO: Ask students which of these causes are prevalent in rural communities? Ask students what influences these preventable cause behaviors?



Chronic Disease Research

Using the following table, any informational handouts provided, and the Internet, complete the graphic organizer below with information about your disease. Focus in particular on the bolded rows (risk factors and prevention strategies).

Category	Information
Disease Name	
Disease description	
Symptoms	
Physiological cause of symptoms	
Risk factors	
Diagnostic Tests <i>(or screening procedures)</i>	
Treatment	
Prevention strategies	



Health Fair Booth Challenge

Your team will present a health fair booth to the community, delivering information on your chronic disease or condition. Your goal is to reduce the prevalence of your chronic disease or condition through education. Your booth should be engaging and build awareness with clear and accurate information. Use the graphic organizer on the following page to plan your booth.

READ: Students can work in small groups of any size (2-5 recommended). Determine the group sizes and how they will be assigned, if at all, prior to the class. Allow student groups to draft their choice of disease, if desired. Make sure each disease is not repeated. If more diseases are needed to account for all the groups, some additional options are: osteoporosis, asthma, and specific types of cancer—ex: lung, skin, cervical—that have some preventable component.

READ: Mayo Clinic Disease Definition handouts are available in the lesson resources and can be printed and provided to students. Alternatively, students can look these up themselves or use any credible online resources, if technology permits.

THINK: Ask students if they have ever attended a health fair. For any students who have, ask what they saw and learned. Ask students what would make a successful health fair or specific booth; what would make one ineffective?



Health Fair Booth Planning

Plan your health fair booth using the following table:

Question	Your Plan:
Title of Booth <i>(clever, catchy, or simple)</i>	
Target Population <i>(Who is most likely to benefit?)</i>	
Knowledge <i>(What information will be communicated?)</i>	
Method of Presentation <i>(draw/sketch booth on a separate page as well)</i>	
Attraction of Audience <i>(How will you draw people in to your booth?)</i>	
Interactive Element <i>(How will audience engage with the material?)*</i>	
Evidence of Success <i>(How will you know if you increased knowledge or awareness?)</i>	
Roles <i>(What will each team member do or say at the booth to play a role?)</i>	

Interactive Element: The audience could fill out a questionnaire, take a quiz, compete in a competition to guess something, answer questions, ask questions, play a game, etc.

THINK: Plan for students to present their booths in the classroom during the next class period (or longer if needed). This can be done by actually setting up the booths around the room and having students take turns rotating around and “manning” their booth, or groups could present one by one to the entire class. An even more authentic and impactful way to carry this out would be conducting an actual school health fair, bringing in other younger students/ classes, or members of the community.



Check Your Knowledge

List 2 risk factors and 2 strategies for preventing your chronic disease or condition.

Chronic Disease or Condition: _____	
Risk Factors	Strategies for Prevention



Create Your Health Fair Booth

Plan your tasks to accomplish to create your booth:

Team Member	Task	Deadline

ASSESS: Optional idea: Another assessment can be conducted during or after the health fair exchange. Students can be responsible for learning at least two risk factors and two preventive strategies for each chronic disease presented by other groups.

HOMEWORK: This homework assignment will help students organize their division of labor and create a to-do list in order to be prepared. Be sure to set clear and realistic deadlines. Another class may be needed for planning, depending on class length and the amount that was accomplished in the first class setting.