JSI Adolescent Breast Cancer Curricula

Overview: This curriculum is for use in high school classrooms or in special sessions for youth to introduce breast cancer as a health topic. It focuses on health disparities affecting Latino populations. Using the curricula will help youth learn about breast cancer prevention, screening, treatment, and support services. It draws upon educational resources from Susan G. Komen for the Cure and the National Library of Medicine.

Target audience: High school students from Latino families; although students of any racial or ethnic background may benefit. It is a series of 5 sessions piloted with 5 classes of sophomores in the Health Topics Class at the High School for Health & Human Services in Lawrence, Massachusetts as well as during an after-school Health Promotion Club at the high school.

Methods/strategies/techniques:

The approach is intended to be highly participatory. Students’ are encouraged to engage in discussions and share their concerns, ideas, and experiences. While instruction is in English, bi-lingual educational materials can be included as resources to share with family members and friends. Optional multi-media presentations and exploration of interactive websites can be used to teach to diverse learning styles while showcasing the availability of online health information resources. Hands-on activities and an emphasis on service learning, in which students promote awareness among others in the community, engage students more fully and foster leadership skills.

- Lecture
- Participatory discussion
- Multi Media presentation: Video and interactive health websites
- Engagement in Service Learning Activities
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Unit 1: Introduction to Breast Cancer

Lesson 1: Why is Breast Cancer a Concern?

Goal
To introduce students to the need for breast cancer awareness and the importance of addressing breast cancer for themselves, their families, and their community to reduce health disparities among the Latino population.

Objectives
By the end of the lesson each student will be able to:

- Define, explain, and give examples of the following terms and concepts:
  - Breast cancer activism
  - Health disparities
  - Access to healthcare
- Identify at least one compelling fact about breast cancer among Latinos, such as:
  - Breast cancer is the leading cause of cancer death among Latina women
  - Latina women are less likely to get early screening and treatment

Preparation and materials
- White board/Newsprint
- Markers
- Computer and large screen classroom monitor (or LCD projector) or other equipment to show digital video.
- Pre-test adapted from Komen Quiz
- Optional: Vocabulary cross word

Introduction

ENGAGE:
1. Tap prior knowledge - Ask students to raise their hand if they know someone who has breast cancer.
2. Warm up activity - Teacher (optional: Guest speaker who is a cancer survivor) share their experiences and encourage youth to discuss (only if they are comfortable sharing).

Activity
EXPLORE:  In this lesson we’re going to learn why breast cancer is important in our community.

- Watch Soraya’s Story Video – “A New Voice in Breast Cancer Activism: Soraya’s Story.” Award-winning Latina singer-songwriter Soraya’s story of recovery and why she joined forces with Susan G. Komen for the Cure to get out an important message to her Latina and Hispanic sisters about early detection. NOTE: While the video is positive in most of its messages, it does end with the fact that Soraya eventually succumbed to breast cancer. You can queue the video to end before that announcement if you feel that is best for your students.

EXPLAIN:  Clarify that Latina women do not get breast cancer more often than other women, but that those with the disease need better access to treatment and services. Introduce the terms: a) cancer incidence (rate of new cancer diagnosis), b) cancer prevalence (proportion of those in the population who have cancer), and c) cancer mortality (rate of deaths due to cancer). Educators should note that staying positive is more likely to lead to individuals protecting their health than emphasizing frightening or discouraging facts. You may want to discuss that progress is being made in Latina women surviving cancer, for example, rather than the fact that Latinas are less likely than white women to survive.

ENRICH:  What factors did the video discuss that may explain what Latina women can do to survive breast cancer? Do you think there are ways to better help women in your community? Introduce and explain the term: health disparities.

Lesson 2: Breast Cancer Basics

Goal
Provide general understanding of breast cancer. Discuss opportunities for students to reduce their risk of breast cancer. Convey the importance of early screening while describing types of screening.

Objectives
By the end of the lesson each student will be able to:

- Define, explain, and give examples of the following terms and concepts:
  - Breast cancer, as it differs from other types of cancer
  - Breast Cancer Screening (self-exam, clinical exam, mammography)
  - Public Health
  - Cancer prevention
• Identify at least two means of reducing risk of breast cancer, such as:
  o Exercise
  o Avoiding alcohol
  o A healthy diet that is low-fat and includes lots of fruits and vegetables

• Recognize the contributions youth can have in addressing breast cancer, such as:
  o Reducing cultural barriers to screening and treatment by talking about breast cancer
  o Taking personal action to reduce risks and prevent getting breast cancer
  o Learning how to improve access to care for family and community members

Preparation and materials
  □ White board/Newsprint
  □ Markers
  □ Pencils/pens
  □ Paper for students
  □ Poster paper
  □ Pre-test adapted from Komen Quiz (attached)
  □ JSI Fact or Fiction Exercise (attached)
  □ Dimes, nickels, and half dollars (to draw average sizes of lumps on poster)
  □ Optional: Vocabulary crossword

Introduction

ENGAGE: 1. Warm up activity - In this lesson we’re going to learn more about breast cancer and what we can do about it.

• Ask students what is cancer? What do they know about breast cancer? Can men get breast cancer? Write any responses on the board.

EXPLAIN: First check for comprehension by having students take the (adapted) Komen Quiz and review answers together as a group.

• Hand out strips of paper with statements about breast cancer from the JSI Fact or Fiction Exercise. Ask students to read the strip they received aloud. Discuss as a group – is it Fact or Fiction (refer to answer sheet).
Activity

EXPLORE: Hand out Buena Vida: Preventing Your Family from Breast Cancer.

- Read in small groups the sections on what is breast cancer, who is at risk, preventing cancer, and testing for breast cancer (pgs 3-6). Review and discuss as a class.

ENRICH: Examine carefully the chart in Buena Vida showing the sizes of tumors found with and without screening.

- Have students use coins to make a similar chart in their small groups on poster paper (average size lump found by first mammogram: dime-sized; found by women practicing regular breast self-exam: size of a nickel; found by accident: size of a dollar coin). Include drawings of healthy versus not healthy cancer cells.

EXTEND: Discuss careers in breast cancer prevention, treatment and care.
Unit 2: Environment and Health

Lesson 1: What is Environmental Health?

Goal
Introduce students to how factors in the environment can affect health. Consider ways to improve environmental health in home, school, workplace, and community settings. Introduce the concept of environmental justice – the right of everyone to a clean and safe environment – and explore how environmental justice is linked to addressing health disparities.

Objectives
By the end of the lesson each student will be able to:

- Define, explain, and give examples of the following terms and concepts:
  - Environmental health
  - Environmental justice
  - Carcinogen
  - Pathways and route of exposure

Preparation and materials
- White board/Newsprint
- Markers
- Handout: JSI Environment and Health Exercise based on ToxTown (attached)
- Optional Computer and largescreen classroom monitor (or LCD projector) or other equipment to show online websites.
- Test out access and familiarize yourself with the websites:
Introduction

ENGAGE:

1. **Activate schema** - Ask students: How do you define the environment? Brainstorm and write on the board. Encourage them to consider the classroom/school surroundings as the environment that they are in (the building, the air, the drinking water). Discuss different environmental settings (homes, schools, workplaces, and community).

2. **Warm up activity (Source: Alternatives for Community and Environment, Roxbury, MA)** - What is justice? How is the environment related to issues of equality and fairness? Brainstorm and write on the board. Come up with an agreed upon definition of environmental justice.

Activity

EXPLORE In this lesson we're going to learn how the environment can affect health.

- Hand out the JSI Environment and Health Exercise based on ToxTown. Break into small groups. Have students discuss in their groups and answer questions on the back of the handout (see below).

  *Look at the picture of an urban community on the other side of this sheet.*

  1) **Name at least 3 things in the environment that might affect the health of residents in this community?**

  2) **Are any of these an issue in your community? Do they concern you or your family?**

  3) **Circle which issue (you listed in question 1) that you think is the most dangerous to residents.**

ENRICH: Compete in groups, alternating with one response per group, to list the factors in the environment that could impact health.

EXPLAIN: - Discuss student responses. Give extra points if students in the group can explain why the factor they name might affect health.

ELABORATE: Discuss as a group which of these environmental factors may be most dangerous to residents. How did they decide? Point out that it is important to prioritize risks and that a person can’t be concerned about
every risk they encounter. Review the factors that environmental scientists use to weigh risks:

- **Toxicity:** How dangerous is the substance? What health problems might it cause? Could even tiny amounts be dangerous?
- **Pathway of Exposure:** How likely is a person to actually come into contact with the toxin or other risk factor?
- **Route of Exposure:** Even if a person comes in contact with a chemical, can it get to a part of the body it can harm? (example, it is safe to touch lead, but not to eat or breathe it)?
- **Duration of Exposure:** How long would a person be exposed over time?
- **Sensitive Populations:** Would children, the elderly, or those who are ill be at risk?

**EXTEND:** Optional: If you have access to online websites, go to ToxTown: [http://toxtown.nlm.nih.gov/](http://toxtown.nlm.nih.gov/) and explore as a class this environmental health learning tool from the National Library of Medicine. (Choose the city scenario to explore environmental health factors in the same picture as was used in the handout).

- Discuss careers in environmental health.

**Lesson 2: Breast Cancer and the Environment.**

**Goal**
To explore possible connections between environmental exposures and breast cancer.

**Objectives**
By the end of the lesson each student will be able to:

- Define, explain, and give examples of the following terms and concepts:
  - Carcinogen (substance that can cause cancer)
  - Radiation (Ionizing radiation is a known breast cancer risk factor.)
  - Estrogenic chemical (chemicals that act like the hormone estrogen; these are being researched for whether they might increase breast cancer)

- Identify at least one way people might be exposed to each of the following environmental factors that is suspected might increase risk of breast cancer:
  - Carcinogens
  - Radiation (Advanced exploration: distinguish ionizing, nonionizing, and electromagnetic radiation.)
  - Estrogenic chemicals
Preparation and materials
- White board/Newsprint
- Markers
- Optional Computer and largescreen classroom monitor (or LCD projector) or other equipment to show online websites.
- Test out access and familiarize yourself with the websites:
  - www.SafeCosmetics.org
  - Advanced Study: Environmental Factors Linked to Breast cancer www.komen.org/environment

Introduction

ENGAGE:
1. Activate schema - In this lesson we’re going to learn about environmental risk factors for breast cancer. Ask students: Do you think the environment can affect breast cancer? Discuss that even scientists are still trying to learn more to answer this question.

Activity

EXPLORE
- Hand out the JSI Environment and Health Exercise based on ToxTown used in Lesson 1. Break into small groups.

Look at the picture of an urban community.

1) Can you find factors in this community that might affect breast cancer?

2) Name at least 3 different types of factors in the environment that might affect breast cancer?

ENRICH: Compete in groups, alternating with one response per group, to list the factors in the environment that could impact breast cancer.

EXPLAIN: - Review how radiation, carcinogens, and estrogenic chemicals can affect cells and might be a factor in breast cancer. Ionizing radiation is known to affect breast cancer. Other types of radiation and chemicals are being studied.

ELABORATE: Brainstorm as a group how one might encounter these environmental factors. Consider:
- Medical x-rays. These important tests have been made less dangerous over time so that they do not release as much radiation.
Pesticides. Certain pesticides may be carcinogenic and/or estrogenic. It is best to avoid pesticides because they are designed to harm organisms. Look for other ways to control pests and if one has to use pesticides, make sure to use those that are least harmful.

**EXTEND:** Optional: If you have access to online websites, research with students the safety of beauty products they use at: [www.SafeCosmetics.org](http://www.SafeCosmetics.org). Find the safest products.

- Discuss careers in environmental health.
Unit 3: Health Information on the Internet

Lesson 1: How to Find Online Health Information You Can Trust?

Goal
Students will learn to find useful online health resources and be able to evaluate whether the website is trustworthy and if the information is based on high quality research.

Objectives
By the end of the lesson each student will be able to:

- Define, explain, and give examples of the following terms and concepts:
  - Expert review
  - Medical library
- Evaluate the quality and trustworthiness of websites offering health information.
- Find the following health information:
  - Low-literacy health information on breast cancer in English and Spanish

Preparation and materials
- White board/Newsprint
- Markers
- Handout: Checklist: Can you trust health information on the Internet? (attached, Source: the National Library of Medicine)
- Review in advance good and bad popular health websites (print sample webpages if you don’t have online access in the classroom).
- Highly Recommended: Computer and largescreen classroom monitor (or LCD projector) or other equipment to show digital video.

Introduction

ENGAGE:
1. Tap prior knowledge - Ask students to raise hands if they have ever looked for health information online?
2. Warm up activity - Group discussion of where youth get health information (include school, television shows, commercials, newspapers, online websites, social media...). Brainstorm and write on board.
Activity

**EXPLAIN** In this lesson we're going to learn how to find useful, high quality health information online that you can trust.

- Hand out Checklist: *Can you trust health information on the Internet?*
  Review the elements of the checklist, including:
  - Who hosts the website and provides the information?
  - Where do they get their funding, is it a commercial site?
  - What is the quality of the information – do expert review the information and is it up to date?
  - Do they ask for any private information from you?

**ELABORATE:** Look at sample good and poor health websites.

**EXTEND:** Discuss careers in public health communication.

Lesson 2: How to Find Online Health Information You Can Trust?

**Goal**
Familiarize students with especially useful websites for teens to learn about breast cancer and websites to identify local environmental health conditions. Explore resources that can be shared with Spanish-speaking family and community members.

**Objectives**
By the end of the lesson each student will be able to:

- Find the following information through use of online resources:
  - Low-literacy health information on breast cancer in English and Spanish
  - Organizations providing breast cancer services in their area
  - Environmental health information specific to their community

**Preparation and materials**
- White board/Newsprint
- Markers
- Test out access and familiarize yourself with the websites:
Create a PowerPoint or printout with “captured pages” of websites to use if you have no online access.

Highly Recommended: Computer and large screen classroom monitor (or LCD projector) or other equipment to demonstrate online resources and individual computer access (computer lab).

Introduction

ENGAGE:

1. **Tap prior knowledge** - Ask students to raise hands if they have ever used MedlinePlus.gov. Discuss how it has been valuable.

Activity

EXPLAIN: In this lesson we're going to explore online websites to learn more about breast cancer and to find organizations in your area that can provide services and support. We’ll also look at websites where we can learn more about environmental health in the community.

EXPLORE: Visit the following websites (or demonstrate using PowerPoint or handouts if you have no online access). Try to find answers to questions students have about breast cancer on these sites.


EXTEND: Discuss careers in health information, medical libraries, research.
Unit 4: Education and Outreach

Lesson 7: Successful Health Education

Goal
To teach students the elements of effective health education and outreach that use elements proven to be effective.

Objectives
By the end of the lesson each student will be able to:

- Define, explain, and give examples of the following terms and concepts:
  - Key messages
  - Target audience
- Demonstrate their ability to create an effective outreach flyer or poster

Preparation and materials
- White board/Newsprint
- Student pens & markers
- Handout: Checklist for Developing Effective Health Education Print Material (Adapted from Susan G. Komen publication. http://ww5.komen.org/uploadedfiles/Content_Binaries/Hispanic.pdf)
- Construction paper

Introduction

EXPLAIN: - Hand out Checklist for Developing Effective Health Education Print Material. Consider as a group each of the elements of effective health education materials:
- Choose your message
- Make it easy to read
- Design it
- Use graphics

Activity

ENRICH: In small groups or as individuals, have students create breast cancer flyers on construction paper to post in the school.

ELABORATE: First have students consider – What are the key messages? Who is the audience? What headings and graphics best convey the message?
Lesson 8: Designing Outreach Campaigns

Goal
Build leadership skills by engaging youth in designing and conducting breast cancer awareness outreach campaigns.

Objectives
By the end of the lesson each student will be able to:

- Define, explain, and give examples of the following terms and concepts:
  - Health promotion
  - Communication channel
  - Media outlet
- Design an action plan to promote breast cancer awareness outreach.

Preparation and materials
- White board/Newsprint
- Student pens & markers

Introduction

1. Activate Schema – Youth as breast cancer activists
   - Show slides of youth participating in breast cancer outreach (if available from activities in prior school years).

Activity

EXPLAIN: What are different communication channels – ways to share information (word of mouth, social networking such as texting and Facebook, public events, advertising, etc.)? What media outlets in the area can be used to spread the word about breast cancer to those you want to reach (radio, television, websites, in English and/or Spanish).

ENGAGE: Which forms of outreach would be most appropriate for reaching fellow students? What about adults in the community? Are there cultural factors to consider? How would one learn what communication channels and media outlets would be most effective?

ELABORATE: Discuss use of social marketing strategies, such as focus groups that gather small groups of people from the target audience to learn about how they prefer to receive information, or “key informant” interviews with community leaders who can provide helpful advice.
**EXTEND:** Plan Breast Cancer Awareness Month activities for your school and discuss ways youth have helped address breast cancer by taking personal action to protect themselves, sharing information with friends and family, and working in the community to raise awareness and improve resources.

**ENRICH:** Break into small groups. Have each group choose a type of breast cancer outreach campaign (such as radio broadcast, breast cancer walk, etc.) or one campaign with different parts. Encourage them to brainstorm the content and approach to different elements of their outreach campaign that include appropriate communication methods and media outlets for their target audience. Have the groups share their different ideas for campaigns.

**EXTEND:** Discuss careers in health communication, health outreach, public relations, and social marketing.
Unit 5: Breast Cancer In-Depth

Lesson 9: Review and Further Exploration

Goal
To reinforce key messages and explain questions students have about breast cancer in greater depth.

Objectives
By the end of the lesson each student will be able to:

- Define, explain, and give examples of the following terms and concepts:
  - Benign
  - Malignant
  - Cancer initiation
  - Cancer promotion
- Commit to at least two actions that can reduce their risk of breast cancer and/or increase survival if they do ever get breast cancer.
- Identify breast cancer screening guidelines for the age and frequency for women to have/conduct:
  - Self-exams
  - Clinical exams
  - Mammography

Preparation and materials
- White board/Newsprint
- Markers
- Buena Vida: Preventing Your Family From Breast Cancer (used in Unit 1, available free in limited quantities from: www.shopkomen.com)

Introduction

1. Tap prior knowledge - In this last session we will review what we’ve learned about breast cancer. What are some of the most important things you learned during this unit?

2. Activate schema – Do you have any questions about what we learned in prior lessons on what is breast cancer and how we can address it for ourselves and those we care about? Do you have questions about how the environment can affect health breast cancer risks?
Activity

**EXPLAIN:** Read pages 7-12 of *Buena Vida*. Consider signs of possible breast cancer:

- A lump in the chest area
- Abnormal thickening of the breast
- Dimpling, puckering or discharge

**ELABORATE:** Introduce breast cancer screening guidelines for the age and frequency for women to have/conduct screening. Komen Foundations recommends:

- Clinical exams (At least every 3 years between ages 20-39. Every year beginning at age 40)
- Mammography (Every year beginning at age 40)
- Breast self-exam does not offer the same benefits as other screening exams; yet it does give women a chance to become more aware of their own bodies and play active roles in their health. Breast self-exam can help you learn what your breasts feel like so that you can notice a change. If you do breast self-exam, you should be sure to also get recommended mammograms and clinical breast exams as directed by your health care provider. Breast self-exam should not be substituted for these other screening tests

**EXTEND:** Consider what happens after screening tests. Lumps may often be found that are benign (not harmful) cysts, while sometimes tests find malignant (cancerous) tumors. Discuss treatments that are available, including surgery, radiation, and chemotherapy.

**EXTEND:** Describe the 2 stages of cancer:

1) Cancer initiation (when cells get damaged and change from normal to abnormal)
2) Cancer promotion (when the cells start to multiply rapidly without control)

Discuss how the time between initiation and promotion can be many years. While people often are diagnosed when they are older, it is important that they avoid risks while they are younger and throughout their life that might damage cells and initiate disease. Staying healthy may also help your body destroy abnormal cells before they become cancerous and multiply.
ENRICH: Introduce information about area support programs for women to help get screening, treatment, care, and support.

KNOWLEDGE ASSESSMENT

Part I Vocabulary – Define, explain give examples of:

1. Benign
2. Mammogram
3. Clinical exam
4. Lymph nodes
5. Chemotherapy
6. Radiation
7. Environmental health
8. Carcinogen
9. Breast cancer
10. Target audience
11. Risk factor

Part II: Open-Ended Response

1. Name three ways to lower your risk factors for getting breast cancer?
2. What is environmental health? List three ways to make your surroundings healthy? Give examples.
3. What could you do to help fight breast cancer among your family and friends? What types of medical screening is available to get an early diagnosis?
4. Name three health careers that could help fight breast cancer? Explain how they would help prevent breast cancer, detect breast cancer, treat patients, or provide other support?