

uBEATS Teacher's Guide:

Introduction to Public Health

This teacher guide is a supplementary text to support the use of the uBEATS “Introduction to Public Health” module for grades 6-12.

To help students develop the knowledge necessary for an incredible future in health care, we created UNMC Building Excellence in Academics Through STEM (uBEATS), an online health science resource for Nebraska students.

UNMC uBEATS modules are short (15 minutes or less), interactive online health science modules to supplement curriculum taught in grades 6 – 12. These do not replace curriculum, but they are a supplement for teachers and students incorporating evidence-based information and UNMC expert guided material. Each module is chunked into sections with formative and summative assessments with immediate feedback provided.

Tips on how to utilize uBEATS modules:

- Internet access is required to view uBEATS modules.
- For those who have access to one-to-one technology, modules can be used in or outside of the classroom as a topic introduction, extension, or review. For classrooms without individual student devices, modules can be used in whole group instruction. Formative assessment questions can use the teacher's preferred call and response method and summative assessment questions can be displayed on the board and answered individually by students or printed and distributed to students after viewing the module.

Objectives

- Describe the foundational characteristics of public health.
- Summarize the three levels of prevention: primary prevention, secondary prevention, and tertiary prevention.
- Identify the types of public health services.

Introduction

Have you ever thought about how many people are committed to protecting and promoting the health of communities? Public Health is so important and yet there are so many threats that impact a community's health, such as unhealthy lifestyles, health equity, water quality, access to care, accidental injuries, food insecurity, poverty, extreme climate events, infectious diseases, reproduction issues, substance abuse, neighborhood safety. And there are even more issues than those! This lesson will help us learn what Public Health is all about.

Prior Knowledge

Before beginning this module, the teacher should understand the Next Generation Science Standards (NGSS) featuring [Three-Dimensional Learning](#).

Technology, Engineering, and Applications of Science. [A Framework for K-12 Science Education](#)

Scientific insights have informed methods of food production, waste disposal, and the diagnosis and treatment of disease. In other words, science-based, or science-improved, designs of technologies and systems affect the ways in which people interact with each other and with the environment, and thus these designs deeply influence society.

National Academies of Sciences, Engineering, and Medicine. 2012. A Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas. Washington, DC: The National Academies Press. <https://doi.org/10.17226/13165>.

Science and Engineering Practices [NGSS](#)

Analyzing and Interpreting data

Crosscutting Concepts [NGSS](#)

Cause and Effect



Key Terms/Vocabulary

Public health, primary prevention, secondary prevention, tertiary prevention, epidemiology, social justice, data-driven, critical care, legislation, diagnosis, treatment, medication, rehabilitation, assessment, policy development, regulations, assurance, equitable access, organizational infrastructure.

Science Standards

Nebraska Science Standards

SC.HS.15.5.e-Evaluate a solution to a complex real-world problem

Nebraska Health Science Standards

HS.HS.7.2.a-Describe the fundamentals of health, wellness, and disease prevention

HS.HS.7.2.b-Explain physical, mental, social, and behavioral health and its impact on healthcare, disease, and prevention

Next Generation Science Standards (NGSS) Core Idea

ETS2-Links Among Engineering, Technology, Science, and Society

National Consortium for Health Science Education Standards (NCHSE)

9.1.2-Examine various aspects of behavioral health

9.1.3-Describe public health strategies for prevention of disease

9.2.2-Identify socioeconomic determinants of health and wellness

Extensions of the lesson

To help students become more familiar with the Key Terms of this module, the teacher can use the vocabulary list for a classroom Word Wall or integrate the vocabulary into review sessions.

Encourage students to check current events for the latest news involving public health.

As student misconceptions become apparent, the teacher may need to reinforce these important concepts:

- “Public Health” and “Clinical Healthcare” are not the same. Public Health involves protecting and improving all health conditions for everyone in the community. Healthcare, on the other hand, is focused on treating individual cases of injury or illness.
- Healthcare workers realize that preventing illness/injury is preferable to treating illness/injury after the problem occurs. There are three kinds of prevention:
 - Primary Prevention attempts to block the illness/injury from ever happening.
 - Secondary Prevention deals with the illness/injury once it happens and attempts to keep it from getting any worse.
 - Tertiary Prevention includes long-term efforts to improve quality of life after a disabling event.
- Public Health services are complex, diverse, and always evolving as new threats to population health emerge. Essential public health services support these core functions:
 - Assessment includes monitoring the population’s health, and investigating, diagnosing, and addressing health problems and hazards.
 - Policy development involves educating the public about health issues, supporting community partnerships, and promoting policies and laws that impact health.
 - Assurance requires a trustworthy workforce that is supported by strong organizational infrastructure protecting the well-being of the population.

Enrichment

Contact your local county Health Department to ask about local public health issues.

Learn about the World Health Organization by exploring their website [WHO](#).

Investigate the activities of the Centers for Disease Control and Prevention [CDC](#).

Explore the website of the American Public Health Association [APHA](#).

Conduct online searches for information about Careers in Public Health.