

Bioethics Scenario: Addiction Vaccine

Abstract

A bioethics scenario involving a vaccine used to treat addiction. Use with the *Bioethical Decision-Making Model* located on our website in which students act as stakeholders to consider bioethical dilemmas.

Logistics

Time Required

▶ **Class Time:**
50-80 minutes depending on how it is structured

▶ **Prep Time:**
10 minutes

Materials

Student handouts

Prior Knowledge Needed

Reward pathway in the brain, drugs affect the reward pathway

Appropriate For:

Primary Intermediate Secondary College

Learning Objectives

- ▶ New understanding of addiction as a brain disease with a genetic component may lead to new treatment and prevention strategies that carry with them ethical, legal and social implications.

Instructions

1. Download the *Bioethical Decision-Making Model* from our website and follow the directions for Classroom Implementation using this scenario.

Note:

This scenario does not specify a drug of abuse for which the vaccine has been developed. This is meant to stimulate discussion about whether knowing which specific drug is involved changes the scenario or the discussion about it.

Credits

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Name _____

Date _____

Addiction Vaccine

A company in Great Britain called Xenova has developed a vaccine that looks promising as a treatment for nicotine addiction. The vaccine works by triggering a person's immune system to make antibodies against nicotine. These antibodies recognize and bind to any nicotine that enters the bloodstream, blocking its entry into the brain. As a result, the reward pathway in the brain is not activated. This reduces "the hit" of the cigarette and therefore the cravings that follow. The vaccine is currently being tested in clinical trials to determine its effectiveness and safety.

Enter the near future: Following development of a successful nicotine vaccine, companies are producing vaccines for other drugs using basically the same principle; antibodies that bind to the drug (and other compounds similar to the drug) preventing entry into the brain's reward pathway.

Linda, who is 26 years old, has entered a treatment program for an addictive drug following arrest for crimes related to her addiction. This is not Linda's first arrest, nor her first time in a treatment program. Because of this, the judge hearing Linda's case sentences her to receive the vaccination that has been developed against her drug of choice. Once vaccinated, Linda will not feel any effects from the drug, nor will she feel any effect from compounds similar to the drug (such as prescription pain killers).

Should the judge be allowed to require that Linda have the vaccination?

Directions:

Answer the following questions in the appropriate boxes on the *Bioethics Organizer* (optional).

1. What are the facts involved in this scenario?
2. Who are the stakeholders involved? Who will be affected by decisions that are made?
3. What are some ethical questions raised by this situation?
4. What are the values that play a role in the decision?
5. List at least three possible solutions to this problem.
6. What is your best solution?

