

Lesson Plan

Understanding the Motivation Behind Drug Abuse Behaviors that Put People at Risk for Contracting H.I.V.

Wednesday, April 26, 2000 High-Risk Areas

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Grades: 6-12

Subjects: Geography, Health, Language Arts, Social Studies
Interdisciplinary Connections

Overview of Lesson Plan: In this lesson, students create concept maps exploring the "causes" of drug abuse that, in Siberia and around the world, often lead to the contraction of H.I.V. Students then develop "solutions" papers that expound upon possible solutions to a "cause" of the spread of H.I.V. in Siberia. Review the Academic Content Standards related to this lesson.

Suggested Time Allowance: 45 minutes- 1 hour

Objectives: **Students will:**

1. Express their views of the causes of drug use, as well as the effects of drug use on individuals, communities, and entire countries.
2. Explore the causes and effects of the epidemics of drug use and H.I.V. in Siberia by reading and discussing "Heroin Carries AIDS to a Region in Siberia."
3. Create detailed concept maps exploring the "causes" of drug abuse that, in Siberia and around the world, often leads to the contraction of H.I.V.
4. Develop "solutions" papers that expound upon possible solutions to a "cause" of the spread of H.I.V. in Siberia, exploring underlying reasons for the behavior, possible solutions, obstacles and effects, as well as determining what different "solutions" might be available in your community that are not as readily available in Siberia.

Resources / Materials:

- student journals
- paper
- pens/pencils
- classroom blackboard
- copies of "Heroin Carries AIDS to a Region in Siberia" (one per student)
- large pieces of white paper (one per small group)
- markers (several colors for each small group)
- tape (to display paper on the walls)

Activities / Procedures:

1. **WARM-UP/DO-NOW:** Students respond to the following, written on the board prior to class: "Fold a piece of paper in your journal in half. Label one column 'Causes' and one column 'Effects.' In the 'Causes' column, list some of the causes of drug use. In the 'Effects' column, list some of the effects that drug use can have on individuals, communities, and entire countries." Create similar columns on the board, and ask students to share their responses, noting their ideas in the appropriate columns. Discuss how the "causes and effects" of drug use might vary depending on the country in which they are used. How might the causes and effects of drug use in the United States differ from those of the less economically stable Russia?

2. As a class, read and discuss "Heroin Carries AIDS to a Region in Siberia," focusing on the following questions:

- a. How was it discovered that there was a large number of H.I.V.-infected people in Irkutsk, Russia?
- b. Why has the number of people with H.I.V. grown so rapidly in Irkutsk in the past several years? What numbers provided in the article support this rapid spread of the virus?
- c. Who are some of the people in Siberia who are using heroin and then contracting H.I.V.? What reasons do they offer for using the drug?
- d. Why, according to the article, are "prostitution and drug use thriving" in this area of the world?
- e. The article lists many towns in Irkutsk touched by H.I.V. Why might the journalist list these towns in the article?
- f. What drug rehabilitation centers and programs are in place in Irkutsk, and in what ways are they helping curb the epidemic?
- g. In what form is the heroin arriving in this area, and why is the "heroin trade ballooning" despite police efforts to stop it?
- h. How might the new sense of freedom in Russia that came with the end of Communist rule ten years ago add to the drug use problem in Irkutsk?
- i. What measures are being enacted to slow the use of drugs and the spread of H.I.V. among drug users? Why aren't all of these efforts successful?

3. Divide students into small groups of four or five students each, and distribute a large sheet of paper and several markers to each group. Instruct groups to write the words "drug use" in the center of the sheet. Explain to students that they will be working in their groups to create "concept maps" of the "causes" of drug abuse that, in Siberia and around the world, often leads to the contraction of H.I.V. Students reread the article in their groups, extracting the causes and motivations behind the drug abuse that, in this situation, lead to an AIDS epidemic. As they find new "causes" (such as boredom, economic stress, and recent freedoms with the fall of Communism), students add the cause to the sheet and draw a line from the center to the word or phrase. The resulting appearance will be that the center words (drug abuse) will be surrounded with other words and phrases, connected by lines to the center like spokes on a wheel. After students have completed this initial task, they should draw lines between causes that they feel are connected, as well as expand further outwards from each cause, exploring why these feelings, behaviors and events happen. (In other words, what causes the boredom that the drug users in the article describe?) After completing this exercise, concept maps will have a spider web appearance. After about 25 minutes, students should post

their groups' concept maps around the room and discuss similarities and differences among the groups' understanding of the issues described in the article.

4. WRAP-UP/HOMEWORK: Each student selects one of the "causes" included on one of his or her group's concept maps and writes a "solutions" paper, focusing on the following questions (written on the board for students to copy prior to leaving class):

- What are some of the reasons that this "cause" of drug abuse described in the article occur in Siberia?
- What could be done to help lessen or eliminate this "cause"?
- What resources would be needed to do so?
- What would be the anticipated effects of this solution?
- In what ways does this "cause" exist or not exist in your community, and what different "solutions" might be available in your community that are not as readily available in Siberia?

Students should share their papers in a future class.

Further Questions for Discussion:

- What medical treatment is available to offset the development of full-blown AIDS?
- What factors in society contribute to a higher number of H.I.V./AIDS victims?
- How might a region that has poor resources and little or no funding for education or prevention programs realistically control the spread of H.I.V. in their community?
- What is the difference between an epidemic and a pandemic?
- How can statistics be used to demonstrate the pandemic nature of AIDS?
- Why might the numbers of people with H.I.V. grow more rapidly in a densely populated country (Russia, South Africa, India, China) than in a sparsely populated country?
- For what reasons might someone start to use drugs?
- What makes certain drugs addictive?
- What social problems are caused by drug abuse?
- What organizations and programs exist to prevent people from using drugs?

Evaluation / Assessment:

Students will be evaluated based on initial journal response, participation in class and small group discussions, well-developed group concept maps, and thorough and thoughtful "solutions" papers.

Vocabulary:

addicted, subculture, catalyst, epidemic, accelerating, preventive, prevalence, venereal, transmission, penetrated, farrago, moribund, confined, rehabilitation, outlandish, blandly, bleak, ramshackle, en masse, brazenly, pittance, deter, ideology, sterile, implemented

Extension Activities:

1. Research H.I.V./AIDS and drug abuse prevention methods and treatment programs. (You may want to interview a medical professional, drug abuse counselor or AIDS counselor on the issues raised in the article, as well as prevention and treatment programs.) Then, create informational pamphlets to distribute to other students or to be available to students through your school's counselors. Students might also develop a series of public service announcements

to be read on the school's morning announcements, aired over a school television program, or printed in the school newspaper.

2. Become a trained H.I.V./AIDS peer educator. Many cities have H.I.V./AIDS peer education programs (such as Project Reach Youth in Brooklyn, NY) that can train students to become peer educators. Then, organize a campaign to recruit others to become peer educators.

3. Write a poem or monologue as if written from the perspective of one of the people mentioned in the article and present it to the class.

4. Create a "How It Works" poster that describes, in words and in illustrations, how a specific drug affects the nervous system or other systems in the human body. Explore the composition and sources of both natural and synthetic addictive drugs. Also, research various theories regarding the causes of drug addiction, both physical and psychological, by searching the Internet for information. Then, compose a brief essay on your findings and discuss it along with your "How It Works" poster in class.

5. Research the percentages or numbers of reported H.I.V. and AIDS cases in countries around the world, or explore drug abuse statistics. (A useful resource is the United Nations' 1998 Human Development Index (HDI), which is a chart of statistics categorizing all countries based on longevity of its people (life expectancy), knowledge (literacy rate), and standard of living (GDP per capita). This can be found at (<http://www.undp.org/undp/hdro/98.htm/>).) Then, color-code a map to indicate the statistics that you find. Compare and contrast the statistics offered on Russia with those of other nations. How might the geographic isolation of Siberia add to the issues discussed in the featured article?

Interdisciplinary Connections:

American History- Debate different social, economic and political "epidemics" in American society today, focusing on what these trends illustrate about American culture.

-Explore reactions to past epidemics, such as influenza and polio outbreaks in the 20th century, and investigate how the past informs our current views of epidemics like H.I.V./AIDS.

Fine Arts- Design tiles for the AIDS quilt (<http://www.aidsquilt.org>), or start a school-wide AIDS Quilt project for which students can design tiles and add them in a visible area of the school. You may also wish to explore other fine arts responses to the AIDS epidemic, in visual, dramatic and musical forms.

Global History- Learn about international health organizations that strive to educate and help victims of H.I.V., AIDS and drug abuse in foreign countries.

Mathematics- Create, distribute and analyze a survey discussing participants' views of H.I.V. transmission and drug use. Include demographic information in your survey in an attempt to track trends of responses of members of different age groups, ethnic backgrounds, and levels of education.

Media Studies

-Explore the portrayal of drug abuse, prevention programs, and treatment in the

media, particularly in films and on television. What different messages are sent through these media? Do you think that movies and television shows are responsible in showing people the dangers of drug abuse? Why or why not?
-Trace how the knowledge about H.I.V./AIDS has grown since the 1970's through finding newspaper and magazine articles from different years and creating a "timeline headline."

Science

-Research other epidemics and pandemics that have ravaged the human population in the past several centuries (polio, cholera, diphtheria, Ebola, hepatitis, influenza, Mad Cow, Bubonic Plague, smallpox, tuberculosis, typhoid, whooping cough). Anatomy of an Epidemic (<http://library.advanced.org/11170>) is an excellent resource for information on these diseases.
-Research HIV/AIDS from a biological standpoint, studying how the disease affects the human body, why it can be transferred easily through body fluids, and how AZT and other medications slow the effects of the disease.

Additional Related Articles:

The New York Times' continuing report on the AIDS pandemic, titled "Dead Zones," can be found on-line at (<http://www.nytimes.com/library/world/africa/index-dead-zone.html>).

Other Information on the Web

Joint United Nations Programme on HIV/AIDS, or UNAIDS (<http://www.unaids.org>), leads, strengthens, and supports an expanded response aimed at preventing the transmission of H.I.V., providing care and support, reducing the vulnerability of individuals and communities to H.I.V./AIDS, and alleviating the impact of the epidemic.

The CDC, or Centers for Disease Control and Prevention (<http://www.cdc.gov>), provides news and statistics about various diseases.

AIDS Education Global Information System, or AEGIS (<http://www.aegis.com>), is the world's largest H.I.V./AIDS knowledge base.

Journal of American Medical Association's H.I.V./AIDS Information Center (<http://www.ama-assn.org/special/HIV/HIVhome.htm>) provides the most up-to-date information about AIDS and H.I.V. research.

The World Health Organization (<http://www.who.int>) aims to help all peoples attain the highest possible level of health.

National Center on Addiction and Substance Abuse, or CASA (<http://www.casacolumbia.org/>), provides access to information, research and commentary on tobacco, alcohol and drug abuse issues, including prevention, treatment and cost data.

The National Council on Alcoholism and Drug Dependence, Inc., or NCADD (<http://www.ncadd.org/>), advocates prevention, intervention, research and treatment of alcoholism and other drug addictions.

Grades 6-8

Geography Standard 15- Understands how physical systems affect human systems. Benchmarks: Knows the ways in which human systems develop in response to conditions in the physical environment; Knows how the physical environment affects life in different regions; Understands relationships between population density and environmental quality; Knows the effects of natural hazards on human systems in different regions of the United States and the world

Connect to State Standard

Health Standard 1- Knows the availability and effective use of health services, products, and information. Benchmarks: Knows the costs and validity of common health products, services, and information; Knows how to locate and use community health information, products, and services that provide valid health information; Knows community health consumer organizations and the advocacy services they provide; Knows situations that require professional health services

Health Standard 2- Knows environmental and external factors that affect individual and community health. Benchmark: Knows cultural beliefs, socioeconomic considerations, and other environmental factors within a community that influence the health of its members

Health Standard 8- Knows essential concepts about the prevention and control of disease. Benchmark: Understands how lifestyle, pathogens, family history, and other risk factors are related to the cause or prevention of disease and other health problems

Health Standard 9- Understands aspects of substance use and abuse. Benchmarks: Knows conditions that may put people at higher risk for substance abuse problems; Knows factors involved in the development of a drug dependency and the early, observable signs and symptoms; Knows the short- and long-term consequences of the use of alcohol, tobacco, and other drugs; Knows public policy approaches to substance abuse control and prevention; Knows community resources that are available to assist people with alcohol, tobacco, and other drug problems

Language Arts Standard 1- Demonstrates competence in the general skills and strategies of the writing process. Benchmarks: Uses style and structure appropriate for specific audiences and purposes; Writes persuasive compositions; Writes compositions that speculate on problems/solutions

Connect to State Standard

Grades 9-12

Geography Standard 15- Understands how physical systems affect human systems. Benchmarks: Knows changes in the physical environment that have reduced the capacity of the environment to support human activity; Knows factors that affect people's attitudes, perceptions, and responses toward natural hazards

Connect to State Standard

Health Standard 1- Knows the availability and effective use of health services, products, and information. Benchmark: Knows factors that influence personal selection of health care resources, products, and services

Health Standards 2- Knows environmental and external factors that affect individual and community health. Benchmarks: Understands how the environment influences the health of the community; Understands how the prevention and control of health problems are influenced by research and medical advances; Understands how cultural diversity enriches and challenges health behaviors

Health Standard 8- Knows essential concepts about the prevention and control of disease. Benchmarks: Understands how the immune system functions to prevent or combat disease; Understands the importance of prenatal and perinatal care to

both the mother and the child; Understands the social, economic, and political effects of disease on individuals, families, and communities
Health Standard 9- Understands aspects of substance use and abuse. Benchmarks: Knows the short- and long-term effects associated with the use of alcohol, tobacco, and other drugs on reproduction, pregnancy, and the health of children; Knows how the abuse of alcohol, tobacco, and other drugs often plays a role in dangerous behavior and can have adverse consequences on the community; Understands that alcohol, tobacco, and other drug dependencies are treatable diseases/conditions
Language Arts Standard 1- Demonstrates competence in the general skills and strategies of the writing process. Benchmarks: Writes compositions that are focused for different audiences; Writes compositions that fulfill different purposes; Writes expository compositions; Writes persuasive compositions that evaluate, interpret, and speculate about problems/solutions and causes and effects
Connect to State Standard

Heroin Carries AIDS to a Region in Siberia

By MICHAEL WINES

RKUTSK, Russia, April 22 -- Thirteen months ago, a young man from this city's rough-and-tumble north side appeared at the government railroad workers' hospital complaining of a head wound suffered in a family fight. A blood work-up soon showed that it was the least of his problems: he was also infected with H.I.V., the virus that causes AIDS.

That was unusual. In the entire Irkutsk region, a Siberian expanse big enough to accommodate France and England in one gulp, health officials had recorded fewer than 200 H.I.V. infections since record-keeping began in 1991.

But when a second north-side man checked into another hospital for an operation a few days later, only to test positive for H.I.V., the officials decided to investigate.

What they found is still resounding through Irkutsk, a run-down river town of 650,000 just north of Mongolia. The two men, it turned out, both attended Vocational School 44, a training institute for river transport workers. Further tests uncovered six more H.I.V. cases among their classmates.

All eight shared another deadly trait: they were addicted to heroin, which first appeared in the city's drug subculture only six or seven months earlier.

Today a region that hardly heard of AIDS a year ago has recorded 5,000 new cases of H.I.V. infection and registered more than 8,500 drug addicts. Those are the official statistics: the true figures could be as much as 10 times as great, officials say.

Perhaps nowhere else in Russia have H.I.V. infections grown so explosively. Heroin has proven the deadly catalyst in this epidemic. It has fueled a sharp rise in drug use and encouraged the needle sharing that helps to spread AIDS.

"It's a fire there," Arkadiusz Majczyk, the United Nations AIDS representative in Russia, said this week. "And nobody is paying attention."

If it is a fire, then the rest of Russia is surely smoldering. The number of H.I.V.-infected Russians is small so far -- 33,000 by official estimates, perhaps 300,000 by international ones -- but the potential for growth is huge.

The United Nations, which joined Russian officials on Friday to announce a new effort to halt the epidemic, says the virus's spread is accelerating and could move beyond drug users without preventive measures.

Already 40 per cent of Russian prostitutes, who often use drugs, are H.I.V.-positive. The growing prevalence of venereal diseases like gonorrhea make sexual transmission of the virus even easier.

And with the poverty and general breakdowns of law and mores that followed the Soviet Union's collapse, prostitution and drug use are thriving.

"The second wave of infection, which will come very soon, is heterosexual transmission," Mr. Majczyk said in an earlier interview. "It will go for the next two or three years, because the main measures which should be taken are connected with prevention. And to work, prevention needs time."

Time is in short supply in Irkutsk. Heroin and H.I.V. have already penetrated virtually every corner of this vast region, a farrago of pristine forest and permafrost, dying company towns and smoky industrial cities.

Heroin has surfaced in Bodaibo, a mountain-ringed gold mining outpost reachable only by small plane, and in Ust-Kut, a northern river port whose shipping business has all but dried up. There is H.I.V. in Mama, a moribund mica mining village some 400 miles north of here, and in Bratsk, a good-sized manufacturing center far down the north-flowing Angara River.

The Irkutsk region is home to about two million people. Simple math says the rate of H.I.V. infection is somewhere between 1 in 40 and 1 in 400.

"But you really have to measure it against the number of youth," because drug use and H.I.V. are largely confined to the young, said Yelena A. Lyustritskaya, who heads a government commission on drug abuse. "And in the Irkutsk region there are 300,000 people between the ages of 14 and 28. So it turns out that every third or fourth young man at age 18 or 20 takes drugs."

No one knows the infection rate among those users. But Dr. Maksim Medvedev, who screens addicts for a private rehabilitation program called Siberia Without Drugs, says roughly 3 of every 10 people he examines have the AIDS virus.

At the government's principal rehabilitation center, 40 of the 62 inpatients are infected with H.I.V. Talk to some of the current and reformed addicts at that center, a tidy, but rundown and cheerless place, and those numbers do not seem so outlandish.

"We used to be the department for glue sniffers," one of the center's doctors said. "There is only one sniffer here now. There are no alcoholics. They are all drug addicts."

A buzz-cut 16-year-old who moved from opium to heroin said he believed that he had gotten H.I.V. by sharing his needle late last year. One 17-year-old with H.I.V. and hepatitis, who began using opium at 15 and switched to heroin about six months ago, offered a common theory to explain the epidemic: outsiders salted the heroin with the ground-up bones of African AIDS victims.

"The countries that supply us don't have anything, only fruits," he said. "Siberia's rich, and they want everybody here to die."

Natalya Kozhevnikova, a 27-year-old from a small diamond-mining town, said many addicts there began using drugs at ages 12 or 13. "There is nothing to do -- no movie theaters, no discos, nothing," she said.

Lelia Starodumova, 23, was a swimming champion and model before she started opium four years ago. Now she and her husband are heroin addicts, and she carries H.I.V. "Ninety-nine percent of drug addicts have H.I.V.," she said blandly. "The only ones who aren't sick are the ones who haven't had their blood tested."

In a bleak two-room apartment across town, opposite the ramshackle factory that produces Russia's top fighter jet, the Su-30, Andrei Kurnosov, a 30-year-old addict, said he had been on drugs for nine years.

When he began, he said, he was among the top five in his law class, aiming for a chance to study in the United States. Now he practices petty thievery and rolls small-time drug sellers for the 150 rubles -- about \$5 -- he needs daily to finance his habit.

Mr. Kurnosov says he has avoided H.I.V. through blind luck. He has shared needles with other addicts, the last time three months ago, although he knows the dangers full well. "You don't care when you need a dose," he said. "The fear of remaining sober and in pain overwhelms any fear of sickness."

Heroin's death grip on its victims offers some explanation of why H.I.V. has raced through Irkutsk's addict population. Opium, whose less insistent craving grants a user some time to find a clean syringe, once was the drug of choice. But unlike heroin, which needs only water to be injected, opium must be carefully cooked and mixed.

So when heroin suddenly appeared some 18 months ago, addicts switched en masse. It first came in liquid form -- in bottles or already-loaded syringes -- and groups of users foolishly filled their syringes from the same bottle, raising the odds that one infected addict would contaminate many others.

Today heroin comes as a powder wrapped in paper "checks," Russian slang for the cash-register tapes that they resemble. Fifty-ruble and 100-ruble checks are sold almost brazenly, from newsstands and bread kiosks and by loitering dealers, in any number of open-air drug markets around town.

Addicts say many police officers have been bought off, and they may be right: in one muddy north-side market named Treity Posylok, or Third Settlement, a militia jeep cruised past knots of dealers and addicts twice in 10 minutes one afternoon this week.

The police, meanwhile, say the heroin trade is ballooning despite their best efforts to stop it. The drug comes by truck from Afghanistan and Tajikistan, far to the west of Irkutsk, and is distributed throughout Siberia from the southern Russian city of Novosibirsk.

Irkutsk's militia seized about 400 pounds of drugs last year, well ahead of previous years but a pittance in comparison with the total traffic. Smugglers vacuum-pack heroin or hide it in shipments of rotting onions to deter drug-sniffing dogs.

More and more, the trade has shifted from individual free-lancers to organized crime.

"It's difficult to control the flow," the deputy chief of the eastern Siberia militia, Pyotr Kobalchok, said this week. "We've even arrested members of the Tajikistan special services who were escorting the smugglers. It's that well-organized."

Beneath such frustration over Irkutsk's plight runs a subtle but pointed undercurrent: this region never had such problems when the Soviet Union existed. Addiction and AIDS are among the consequences of freedom and capitalism that Westerners neglected to mention when Communist rule ended a decade ago.

Law-enforcement officials unanimously blame the drug problem on the opening of Soviet borders and the loosening of government control over ordinary people.

"Back then, there were no charter flights," said Nikolai Pushkar, chief of the eastern Siberia transport militia, which battles drug smuggling. "Everything was state-owned, and it wasn't possible to negotiate with the state. In the past only the president could have his own plane. Now anyone with money can have a plane.

"No matter how much we criticize the Soviet system, there was a certain ideology. We were educated in an absolutely different way. Of course, there were abuses when the state interfered with family life. But there were standards then."

Irkutsk has declared its own war on both of its epidemics, hiring new narcotics police, printing educational brochures and changing the school curriculum to promote what officials call "the healthy way of life." But beyond telling people to just say no to drugs, officials have done little to prevent the spread of H.I.V. among addicts and have no immediate plans to do so.

Proven AIDS preventive measures, like providing drug addicts with sterile needles or bottles of virus-killing bleach, remain on the drawing board -- in part, some critics say, because politicians believe that they amount to an endorsement of drug use.

"We had contact with different people last year, including people from foreign countries where such programs are implemented," Dimitri Piven, the Irkutsk region's deputy head of health care, said in an interview this week. "Since there are different schemes, we are choosing an optimal one for ourselves." Mr. Piven said officials would try to put new preventive measures into effect among addicts before year's end.

The addict Mr. Kurnosov, his gaunt, rheumy face a contrast to hands swollen grotesquely by repeated injections, said that would be too late for many addicts. For many others, it already is.

"The generation of the 70's is dying," he said. "The generation of the 80's is already dead -- not all, not 100 percent. But 50 percent are killing themselves before a natural death."