

CDC Science Ambassador Workshop

2015 Lesson Plan

RAGE Outbreak: Making Grueling Public Health Decisions

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RAGE Outbreak: Making Grueling Public Health Decisions

Summary

Public health ethics systematically uses ethical principles, values, and beliefs of stakeholders, as well as scientific and other information, as a basis to clarify, prioritize and justify possible courses of action to address public health problems. This lesson plan uses a Four Corners activity to teach students about public health ethics as a field of study and practice. As a field of study, public health ethics seeks to explain and clarify principles and values that guide public health actions. Principles and values provide a framework for decision-making and a means of justifying decisions. As a field of practice, public health ethics applies relevant principles and values to public health decision-making. The three core functions carried out by public health ethics inquiries are as follows: (1) identify and clarify an ethical dilemma; (2) analyze the concern in terms of alternative courses of action and their consequences; and (3) resolve the dilemma by deciding which course of action best incorporates and balances the guiding principles and values.

This lesson plan is based on a fictional infectious disease, rabies-like gradual encephalopathy (RAGE), outbreak scenario. It is designed to address choices made by different stakeholders in the context of public health ethics. Students will consider the option of vaccination for RAGE. Using a jigsaw activity, students will use the scenario provided, as well as supplemental materials, to provide supportive evidence for their assigned stakeholders' position. Each student will present their findings during a community meeting among all other stakeholder representatives. Students will then evaluate the multiple viewpoints to make a statement for which public health course of action would be most ethical. Because often no right or wrong answer exists, students will select and provide evidence for a choice that best aligns with the principles of public health ethics. Students will present this statement as a written assignment.

This lesson is designed for high school students in grades 9–12. Students should have a basic knowledge of vaccines and the concept of herd immunity.

Learning Outcomes

After completing this lesson, students should be able to

- examine scientific literature to identify public health ethical concepts by using teacher-provided scenarios;
- analyze information from different sources to construct statements from the viewpoint of a stakeholder; and
- evaluate multiple viewpoints by using evidence to reach a consensus decision.

Duration

This lesson can be conducted as one, 90-minute lesson or divided into two, 45-minute lessons.

Procedures

Day 1: Introduction to Public Health Ethics and Outbreak Scenario (45 minutes)

Preparation

Before Day 1,

- Examine the U.S. Public Health Service Syphilis Study at Tuskegee, select and review certain articles from the Teacher's Resources List (Appendix 1);
- Review the Four Corners introductory questions (Appendix 2A);
- Print the four classroom labels (Appendix 2B) and post one in each corner of the classroom; and
- Print Worksheet 1: RAGE Outbreak (Appendix 3A), and any optional stakeholder articles.

Materials

- Resources (Appendix 1)
Description: Different websites and articles that provide background information necessary to create an introductory presentation for the students.
- Four Corners Questions (Appendix 2A)
Description: The introductory questions will have students think about medical ethics, bioethics, and public health ethics. Review these questions before the class.
- Four Corners Classroom Labels (Appendix 2B)
Description: These cards will be used to label where students should move in the room on the basis of their response to the Four Corners questions.
- Worksheet 1: RAGE Outbreak (Appendix 3A)
Description: This handout will provide students with background information on the RAGE scenario and the different stakeholders.

Online Resources

- The Tuskegee Syphilis Experiment and Medical Ethics
URL: <https://www.youtube.com/watch?v=9Rg75zEVB1g>.
Description: University of Maryland Associate Professor of Philosophy, Dr. Sam Kersgtein, explains the Tuskegee Syphilis Experiment and how it influenced medical ethics and the treatment of patients.
- CDC Tuskegee Website for Background Information
URL: <http://www.cdc.gov/tuskegee/index.html>.
Description: This website provides background information about the U.S. Public Health Service Syphilis Study at Tuskegee, including disease, study, timeline, and presidential apology.

Activity

Four Corners Introductory Activity (5 minutes)

1. Print four signs labeled: “Yes,” “No,” “Maybe,” and “I Don’t Know,” and post one in each corner of the classroom (Appendix 2B).
2. Ask students to stand up and gather in the center of the classroom.
3. Explain to students that they will be asked a series of questions (Appendix 2A), and will respond to each by moving to the corner of the classroom that best matches their opinion or response. Selected students can be asked to justify their movement after each question (Note: The number of students selected will depend on the student's location and the time permitted for discussion).
4. Students will return to the center starting point before the next question. This process will continue until all questions have been asked, and multiple students have had the opportunity to justify their viewpoints.

Presentation — Introduction to Public Health Ethics and Scenario (20 minutes)

5. Provide students with background information appropriate to this activity. Suggestions include an overview of public health ethics, by using the Belmont Principles and the Tuskegee Study as examples. Use the resources shared in the Resources section (Appendix 1) to develop a presentation that will best suit your audience and their background knowledge.

Public Health Ethics Stakeholder Introduction (20 minutes)

6. Divide students into small expert groups and assign each group the role of one stakeholder
 - public health officer
 - healthcare professional
 - concerned community member
 - vaccine-hesitant parent
7. Provide each student with a copy of Worksheet 1: RAGE Outbreak (Appendix 3A), and allow students within each expert group to read and analyze the scenario.
8. Through collaborative discussions, students will brainstorm and identify the viewpoint of their stakeholder.
9. Optional: Additional articles from the Resources (Appendix 1) can be shared and distributed to different stakeholder groups as needed.
10. Each student will use the information identified during the group brainstorming session as the starting point for their individual research (homework). The goal is for each student to compile relevant literature and data that supports their stakeholder statement. Students will share the information gathered with the other students during Day 2 of this lesson.

Day 2: RAGE Outbreak Jigsaw Activity and Writing Assessment, 45 minutes

Preparation

Before Day 2,

- Print Worksheet 2: RAGE Outbreak — Community Meeting (Appendix 3B), one copy for each student.
- Review the Four Corners conclusion questions (Appendix 2A).
- Reprint the four classroom labels (Appendix 2B) and adhere one to each corner of the classroom.
- Review and print Assessment 1: RAGE Outbreak — Writing Assessment (Appendix 4A), one copy for each student.
- Print the RAGE Outbreak - Wild Cards (Appendix 4B), one copy per every nine students.
- Prepare Assessment 2: Exit Ticket (Appendix 5), one ticket for each student.

Materials

- Worksheet 2: Community Meeting Notes (Appendix 3B)
Description: Students will use this comparison table to summarize and record the information presented by the other stakeholders during the community meeting.
- Assessment 1: RAGE Outbreak — Writing Assessment (Appendix 4A)
Description: This writing assignment will outline the format and expectations of the summative assessment. Students will use the rubric to guide their writing process.
- RAGE Outbreak — Wild Cards (Appendix 4B)
Description: Each student will draw one wild card that will shift the outbreak scenario, and they must address this change in their final summative writing assignment.
- Four Corners Questions (Appendix 2A)
Description: Students will answer these conclusion questions to reflect upon the jigsaw activity while considering their new public health knowledge.
- Four Corners Classroom Labels (Appendix 2B)
Description: Post these labels where students should move in the room on the basis of their response to the Four Corners questions.
- Assessment 2: Exit Tickets Printable (Appendix 5)
Description: Students will complete the exit tickets before dismissal.

Activity

Stakeholders (Expert Groups) (10 minutes)

1. Students will meet in their stakeholder (expert) groups to share, discuss, and compile their individual research findings that they gathered for homework. Students in the expert group will have the opportunity to debate which viewpoint should be taken, including considerations of trade-offs and compromises. Then, the group will vote on which viewpoint they will adopt. Before voting, remember to provide students with a voting threshold (e.g., majority wins or a 2/3 majority required) for adopting the viewpoint. You might want to discuss with your class that by voting, they are using procedural ethics. Since consensus on controversial substantive matters often proves difficult or impossible, procedural ethics allows all stakeholders to be heard. It also underscores why posing multiple alternatives is often used to arrive at a decision. Students can choose to compile their key statements by using technology, such as a Google Document.
2. One student from each of the four stakeholder (expert) groups will assemble to form a public health community meeting (home group). Four students per community meeting should be included.

Public Health Community Meeting (Home Groups) (20 minutes)

3. Each public health community meeting stakeholder will take turns presenting their decision regarding who should be vaccinated. During each presentation, all other stakeholders present will listen attentively and complete the corresponding Community Public Health Community Meeting — Student Handout (Appendix 3B).
4. Stakeholders within each community meeting must reach a consensus as to whether they support mandatory vaccination to prevent RAGE.

Four Corners Activity — Vaccination Consensus (5 minutes)

5. Students will return to the middle of the classroom for the final Four Corners questions.
6. Repeat the Four Corners activity by using the conclusion questions (Appendix 2A). Students will respond by moving to the corner of the classroom that best matches their opinion or response. Ask selected students to compare their response with that of their stakeholder, and justify their movement.

Introduction to Evaluation Writing Assignment (10 minutes)

7. Hand out and read through Assessment 2: RAGE Outbreak — Writing Assessment (Appendix 4A) as a class. Review the rubric in detail, discuss the summative assignment expectations and assign a due date. Options include, (1) have the students use the template as the assignment, or (2) as the outline for a longer, more detailed essay (depending on grade, time, and ability). Allow each student to draw one scenario shifting wild card from the deck (Appendix 4B). This card must be considered during the writing assignment.

Exit Ticket (2 minutes)

8. Provide each student with one card from Assessment 2: Exit Ticket (Appendix 5) and direct students to complete the ticket before leaving class.

Conclusions

This interactive public health ethics activity provides students opportunities to discover the complexities of public health ethics and learn how contrasting viewpoints affect decision making. The introductory Four Corners questions activity and presentation provides students with the background knowledge necessary to successfully complete the jigsaw activity. The activity has students examine and analyze scientific literature to develop a statement on the basis of their stakeholder's viewpoint. During this process, students develop research skills, debate strategies, and practice their public speaking skills. By evaluating different stakeholder's statements, each student will complete a summative writing assessment that outlines a strategy for vaccination, in response to the RAGE outbreak.

Assessment

- Assessment 1: Evaluation Writing Assessment (Appendix 4A)

Learning Outcomes Assessed

- Analyze information from different sources to construct statements from a stakeholder viewpoint.
- Evaluate multiple viewpoints on the basis of cause and effect relationships to reach a consensus policy.

Description: This individual summative assessment writing task provides students with the opportunity to apply their knowledge regarding viewpoints toward vaccinations for a new scenario. Students will have to respond to the writing prompt, "Should vaccinations for RAGE be mandatory?" They will have to answer this from different stakeholder viewpoints, while providing different evidence for each stakeholder. They must take into consideration the shift in scenario outlined on their wild card. Use the writing assessment template (Appendix 4) in its current form or as an outline for an essay writing assignment. Considerations include preference, desired outcomes, allotted time, and student ability.

- Assessment 2: Exit Ticket (Appendix 5)

Learning Outcomes Assessed

- Evaluate multiple viewpoints on the basis of evidence to reach a consensus.

Description: This formative assessment assesses the strength of student statements throughout this activity.

Educational Standards

In this lesson, the following CDC Epidemiology and Public Health Science (EPHS) Core Competencies for High School Students¹, Next Generation Science Standards* (NGSS) Science & Engineering Practices², and NGSS Cross-cutting Concepts³ are addressed:

HS-EPHS 1-1: Describe how epidemiologic thinking is used to provide an evidence-based explanation concerning the causes and correlations of health and disease.

NGSS Key Science & Engineering Practice²

Constructing Explanations and Designing Solutions

Apply scientific ideas, principles, and/ or evidence to provide an explanation of phenomena and solve design problems, taking into account possible unanticipated effects.

NGSS Key Crosscutting Concept³

Cause and Effect

Cause and effect relationships can be suggested and predicted for complex natural and human designed systems by examining what is known about smaller scale mechanisms within the system.

HS-EPHS 1-2: Discuss how epidemiologic thinking and a public health approach is used to transform a narrative into an evidence-based explanation.

NGSS Key Science & Engineering Practice²

Obtaining, Evaluating and Communicating Information

Critically read scientific literature adapted for classroom use to determine the central ideas or conclusions and/or to obtain scientific and/or technical information to summarize complex evidence, concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.

NGSS Key Crosscutting Concept³

Cause and Effect

Empirical evidence is required to differentiate between cause and correlation and make claims about specific causes and effects.

HS-EPHS 4-1: Describe a model illustrating how scientific, social, economic, environmental, cultural, and political systems influence intervention performance patterns.

NGSS Key Science & Engineering Practice²

Developing and Using Models

Develop, revise, and/or use a model based on evidence to illustrate and/or predict the relationships between systems or between components of a system.

NGSS Key Crosscutting Concept³

Cause and Effect

Changes in systems may have various causes that may not have equal effects

*Next Generation Science Standards is a registered trademark of Achieve. Neither Achieve nor the lead states and partners that developed the Next Generation Science Standards was involved in the production of, and does not endorse, this product.

- ¹ Centers for Disease Control and Prevention (CDC). Science Ambassador Workshop—Epidemiology and Public Health Science: Core Competencies for high school students. Atlanta, GA: US Department of Health and Human Services, CDC; 2015. Not currently available for public use.
- ² NGSS Lead States. Next Generation Science Standards: For States, By States (Appendix F—Science and Engineering Practices). Achieve, Inc. on behalf of the twenty-six states and partners that collaborated on the NGSS. 2013. Available at: <http://www.nextgenscience.org/sites/ngss/files/Appendix%20F%20%20Science%20and%20Engineering%20Practices%20in%20the%20NGSS%20-%20FINAL%20060513.pdf>
- ³ NGSS Lead States. Next Generation Science Standards: For States, By States (Appendix G—Crosscutting Concepts). Achieve, Inc. on behalf of the twenty-six states and partners that collaborated on the NGSS. 2013. Available at: <http://www.nextgenscience.org/sites/ngss/files/Appendix%20G%20%20Crosscutting%20Concepts%20FINAL%20edited%204.10.13.pdf>

Appendices: Supplementary Documents

Appendix 1: Resources

Resources

Public Health Ethics — Key Concepts

- CDC. Public Health Ethics. *CDC*. CDC. <http://www.cdc.gov/od/science/integrity/phethics/>. Published April 10, 2015. Accessed October 22, 2015.
- Public Health Leadership Society. Principles of the Ethical Practice of Public Health. Public Health Leadership Society. http://www.cdc.gov/about/ethics/pdf/lunch_and_learn/Principles%20of%20the%20Ethical%20Practice%20of%20Public%20Health.pdf. Published 2002. Accessed August 12, 2015.
- Faden, R. and Shebaya S. Public Health Ethics. The Stanford Encyclopedia of Philosophy. <http://plato.stanford.edu/entries/publichealth-ethics/>. Spring 2015. Published April 12, 2010. Accessed October 23, 2015.
- CDC. U.S. Public Health Service Syphilis Study at Tuskegee. *CDC*. <http://www.cdc.gov/tuskegee/timeline.htm>. Published December 30, 2013. Assessed October 23, 2015.
- Tuskegee University. U.S. Public Health Service Syphilis Study at Tuskegee. http://www.tuskegee.edu/about_us/centers_of_excellence/bioethics_center/about_the_usphs_syphilis_study.aspx. Accessed October 23, 2015.
- Tuskegee Syphilis Experiment. The Tuskegee Syphilis Experiment and Medical Ethics [Video]. YouTube. <https://www.youtube.com/watch?v=9Rg75zEVB1g>. Published August 15, 2011. Accessed October 23, 2015.

Public Health Ethics Short Course — CDC Train

- CDC Train. Public Health Ethics Course. *CDC*. CDC. <https://cdc.train.org>.
 - Module 1: Distinguishing Public Health Ethics from Medical Ethics (Course ID #1050863)
 - Module 2: Values and Beliefs Inherent to a Public Health Perspective (Course ID #1050887)
 - Module 3: The Public Health Code of Ethics (Course ID #1050890)
 - Module 4: Law and Ethics in Public Health (Course ID #1050892)
 - Module 5: Pandemic influenza: A Justice Case Study (Course ID #1050897)
 - Module 6: Decision-making in Public Health Ethics (Course ID #1050901)
 - Module 7: Barriers to the Ethical Practice of Public Health (Course ID #1050903)
 - Module 8: Responding to Unethical Events (Course ID #1050904)

Vaccination Overview

- CDC. Vaccines and Immunizations. *CDC*. CDC, 27 Aug. 2015. 30 Aug. 2015. Web. Available at: <http://www.cdc.gov/vaccines/default.htm>.
- Vaccine War. *Frontline*. PBS. WGBH, Boston. 24. Mar. 2015. Television (running time 53:41). Available at: <http://www.pbs.org/wgbh/pages/frontline/the-vaccine-war/>.

Herd Immunity

- The National Institute of Allergy and Infectious Diseases. Community Immunity. Vaccines.gov. <http://www.vaccines.gov/basics/protection/>. Published April 16, 2011. Accessed October 23, 2015.
- Fine P., Eames, K., and Heymann DL., “Herd Immunity”: A Rough Guide. *Clinical Infectious Diseases*. 2011;52(7):911–916. <http://cid.oxfordjournals.org/content/52/7/911.full>. Accessed October 23, 2015.
- Rashid H., Khandaker, G., and Booy R. Vaccination and herd immunity: what more do we know? *Curr Opin Infect Dis*, 2012;25(3):243–249.
- Stephens DS. Vaccines for the Unvaccinated: Protecting the Herd. *The Journal of Infectious Diseases*. 2008;197(5): 643–645. http://jid.oxfordjournals.org/content/197/5/643.full?ijkey=bdbcb7627af2ed75aeca62ceb8d9918d71b1d1f2&keytype2=tf_ipsecsha. Accessed October 23, 2015.

Statements against Vaccination

- Editorial. A Case of Junk Science, Conflict and Hype. *Nature Immunology*. 2008;9(12):1317. <http://www.nature.com/ni/journal/v9/n12/pdf/ni1208-1317.pdf>. Accessed October 23, 2015.
- Kata A. A postmodern Pandora’s box: anti-vaccination misinformation on the Internet. *Vaccine*. 2010;28:1709–1716. http://www.apel-pediatri.org/attachments/030_antivaccinatori%20websitea%20da%20vaccine.pdf. Assessed October 23, 2015.
- Poland GA. and Jacobson RM. Understanding those who do not understand: a brief review of the anti-vaccine movement. *Vaccine*. 2001;19: 2440–2445. http://www.researchgate.net/publication/222658306_Understanding_Those_Who_Do_Not_Understand_A_Brief_Review_of_the_Anti-vaccine_Movement. Accessed October 23, 2015.
- Specter, M. Vermont Says No To the Anti-Vaccine Movement. *The New Yorker*. May 29 2015. <http://www.newyorker.com/news/news-desk/vermont-says-no-to-the-anti-vaccine-movement>. Accessed October 23, 2015.

Appendix 2A: Four Corners Activity — Questions

Four Corners Activity Questions

Introduction Questions — Medical, Research and Public Health Ethics (Day 1)

1. If a treatment for a disease is known, should all persons with the disease have access to the treatment?
2. A researcher knows that a drug will benefit children with a disease. The media has announced this drug, and patients are interested in receiving the drug. Should the researcher alert the public that the science is still unclear about adverse events?
3. Should a researcher stop an experiment when a clearly better drug or technique is discovered?
4. A parent refuses to give a child a drug that can save the child's life. Should a judge force the parents to provide the treatment?
5. If the child in Question 4 is not given the drug, the illness will spread to other persons. Does this change your opinion?

Conclusion Questions — Vaccination Consensus (Day 2)

1. In your community public health meeting, did you decide that the best solution to control RAGE was mandatory vaccination?
 2. Did any community group member make an unethical decision?

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YES

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NO

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DON'T
KNOW**

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Appendix 3A: Worksheet 1: Vaccination Ethics of a Public Health Outbreak

RAGE Outbreak

Name: _____

Date: _____

Directions: Read and analyze the fictional scenario. Use this information in your stakeholder (expert) groups to develop an understanding of your viewpoint toward mandatory vaccination. Through collaborative discussions, brainstorm and identify your stakeholder's viewpoint.

The Aim

This scenario is designed to address the choices made by different stakeholders in the context of an emerging infectious disease outbreak. During the course of this exercise, you will be asked to analyze the situation from the viewpoint of different stakeholders, make a fact-based decision on whether vaccinations should be mandatory, and support your decision during discussions about the scenario. You must select evidence from this narrative, as well as supplemental articles, to find the facts that best support the position. Often times, no right or wrong answer exists; simply select a choice that aligns with the principles of public health ethics to the best of your ability and support your choice with evidence from the texts.

The Scenario

An emerging infectious disease, identified as a potential relative of the rabies virus, is spreading through the United States. The new virus is being called rabies-like gradual encephalopathy (RAGE) virus and has several marked differences from classical rabies infections. While rabies is usually a zoonotic infection (transmitted from infected animals to people), RAGE spreads from person-to-person through virus-containing saliva. The disease begins with flu-like symptoms followed by symptoms of cerebral dysfunction, anxiety, increased salivation, confusion, and agitation. In many patients, the agitation progresses to a state of violent rage and often has led to biting attacks, which allow for RAGE-virus transmission. Unlike classical rabies, RAGE does not quickly lead to death; instead RAGE-virus infected individuals often survive for a surprisingly long time without medical care. The leading cause of morbidity and mortality arising from RAGE to date has been related to violent attacks by RAGE-virus infected persons. The public health and medical communities are struggling with how to contain the spread of RAGE, as well as how to treat infected persons. So far, RAGE-virus infected persons are being isolated while researchers continue to look for a treatment.

BioZXPharma, a pharmaceutical corporation, has released a vaccine. Preliminary tests indicate that when an entire community is vaccinated, transmission appears to be halted, even when a RAGE-virus infected person enters the community. Among larger populations, it is unclear whether vaccinating only a portion of the population stops the RAGE-virus spread. Stories are circulating about vaccinated people who have been bitten by RAGE-virus infected persons presenting with RAGE. BioZXPharma has received emergency Food and Drug Administration (FDA) approval to distribute the vaccine, therefore your community has enough doses. The vaccine seems to work well and might be a good tool to prevent transmission. However, the vaccine is not 100% effective and it was approved without completing all the clinical trials that normally are performed. Most dauntingly, preliminary tests for the vaccine have reported multiple adverse events among those who are vaccinated, including a high rate of immediate death among children aged <12 years (approximately 1.5 deaths in 10,000 vaccine recipients), and

among older persons (aged 65+ years) (approximately 1.1 in 10,000). You and a group of stakeholders are asked to recommend who should be vaccinated and whether it should be mandatory.

The Stakeholders

Public health officials have been conducting a vaccine marketing campaign. They believe vaccination is the quickest way to stop the spread of RAGE. Serious concerns exist regarding the adverse events for children and older persons. During the course of this marketing campaign, public health officials have been emphasizing herd immunity. Herd immunity occurs when a sufficient proportion of a population is immune to an infectious disease (through vaccination or prior illness) to make its spread from person to person unlikely. Even unvaccinated persons are offered certain protection, because the disease has little opportunity to spread within the community. Certain public health professionals believe that mandatory vaccination of the entire population is the safest course of action. Others are more wary about the public reaction to a mandatory vaccination campaign, especially for children and older persons. Either way, all agree that vaccination is crucial to stopping the RAGE outbreak. Opinions are more split over how to handle isolated RAGE-virus infected persons.

Healthcare professionals are being advised to administer the RAGE vaccine to all of their patients. The majority are in compliance, although somewhat apprehensive to administer the vaccine to children and older persons. The majority of healthcare professionals have reported that if a patient does not want to receive the vaccine, they have not pressured them to receive it. Although they are supposed to report these persons to the local public health officials, the majority of healthcare professional have chosen to respect their privacy. Certain healthcare professionals have stated that they are concerned about their RAGE-virus infected patients who are currently isolated and not receiving care.

Concerned community members are rushing to their doctors to receive their vaccinations. Certain persons are lobbying public officials to make the RAGE vaccine mandatory. These citizens are also worried that RAGE-virus infected persons will never recover and that long-term isolation is a poor option.

Vaccine-hesitant parents are concerned that the vaccine was rushed to market with incomplete research. They feel that the vaccine is unsafe and are refusing it for family members, particularly for children and older persons. In certain small communities that have not yet had a case of RAGE, hesitation toward vaccination has been exacerbated by the lack of people infected. Public health officials are concerned that if too much hesitation among parents is present, vaccination levels will fall below the levels required to achieve herd immunity.

Assigned Stakeholder _____

Expert Group Brainstorm Notes:

Homework: Use the information identified during the group brainstorming session as a starting point for your individual research. The goal is for you to compile relevant literature and data to support your stakeholder statement. The information gathered will be shared among group members next class.

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Appendix 3B: Worksheet 2: Community Meeting Notes

RAGE Outbreak Community Meeting

Name: _____

Date: _____

Directions: As a representative of your stakeholders, you will present a statement regarding vaccination for the RAGE outbreak during a community meeting. You will also hear from other stakeholders. Throughout the meeting, synthesize the information presented to fill in the strengths and weaknesses of each stakeholder’s viewpoint. Concisely outline each stakeholder’s key statement toward mandatory vaccination, then develop a group consensus statement.

Question: Should the RAGE vaccination be mandatory?

Question: Should the RAGE vaccination be mandatory?			
Public Health Officer			
Healthcare Professional			
Concerned Community Member			
Vaccination-hesitant Parent			
Group Consensus Should the RAGE vaccination be mandatory?			

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Appendix 4A: Assessment 1: RAGE Outbreak Summative Writing Assessment

RAGE Outbreak Summative Writing Assessment

Name: _____

Date: _____

Directions: Read the task outlined below and review the rubric. Fill in the corresponding writing assessment worksheet providing evidence for each viewpoint. Then, write a paper presenting your viewpoint.

The Task

Decide whether to require mandatory vaccination for RAGE. Consider all stakeholder options and any ethical concerns raised. Discuss the viewpoint of each stakeholder with two or three facts provided in the narrative, supplemental reading, or additional research. Make sure to consider the information presented in the wild card before beginning the assignment. Be sure to include **factual evidence***; do not base your writing on opinions. Then, identify how you weighed the evidence from the viewpoint of each stakeholder to make an overall recommendation for or against mandatory vaccination. Discuss the ethical implications of your decision.

You can use the worksheet provided, and additional pages if necessary to outline your statement.

*Follow the citation style used by your school to acknowledge the source of the evidence presented.

RAGE Outbreak Writing Assessment Rubric

Criteria				
Decision	The decision is clearly stated and justified. It is directly based on the evidence presented, and demonstrates substantial consideration of public health ethics.	The decision is stated and justified. It is based on the evidence presented, and demonstrates consideration of public health ethics.	The decision is stated and somewhat justified. Limited consideration of public health ethics has been included.	The decision is unclear or is unjustified.
Evidence	Presents sufficient, specific, and relevant evidence (facts and examples) that support the decisions presented for each stakeholder.	Presents mostly relevant evidence (facts and examples) that support the decisions presented for each stakeholder.	Presents relevant evidence (facts and examples) that support the decisions presented for the majority of stakeholders.	Limited or irrelevant evidence (facts and examples) is presented for certain stakeholders.
Spelling and Grammar	Writing is free from spelling and grammar errors.	Writing has a limited number of spelling or grammar errors.	Writing has multiple spelling or grammar errors.	Limited evidence exists that the work has been checked before submission.
Citations	All evidence is properly cited.	The majority of evidence is properly cited.	Certain evidence is properly cited.	Limited or no citations are provided.

RAGE Outbreak Writing Assessment Outline

Question: Should the RAGE vaccination be mandatory?

Stakeholder 1: Wild card stakeholder Stakeholder: _____	
Decision	
Evidence 1	
Evidence 2	
Evidence 3	
Stakeholder 2: Public health official	
Decision	
Evidence 1	
Evidence 2	
Evidence 3	

Stakeholder 3: Healthcare professional	
Decision	
Evidence 1	
Evidence 2	
Evidence 3	
Stakeholder 4: Concerned citizen	
Decision	
Evidence 1	
Evidence 2	
Evidence 3	

Stakeholder 5: Vaccine-hesitant parent	
Decision	
Evidence 1	
Evidence 2	
Evidence 3	
Overall Recommendation	
Decision	
Justification 1	
Justification 2	
Justification 3	
Ethical Implications	

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Wild Cards

Wild Cards



Researcher

A researcher conducts a study that indicates the vaccine causes RAGE among 1/1,000 persons vaccinated. The researcher realizes that if the findings are shared, it might cause panic.



Pharmaceutical executive

An analyst has provided information that the price of the vaccine must be raised by \$2,500 per dose to recoup research costs. Certain communities will be unable to afford the vaccine, but continuing to offer it at a reduced rate will bankrupt the pharmaceutical company.



Economist

A cure for RAGE has been discovered, but it requires extensive, ongoing treatment. The cost is approximately 1,000 times greater than vaccination costs. Anti-vaccination activists assert that RAGE will soon be cured and they should not be required to receive the vaccine. Public health officials have modeled a system that refutes this and are still recommending vaccination.



Schoolboard Member

After a RAGE outbreak at a major metropolitan school, a schoolboard meeting is taking place to determine how to treat unvaccinated students. Children of vaccine-hesitant parents are in attendance and state that just because their parents have chosen not to vaccinate, they should still be allowed to attend school.

Wild Cards



Researcher

A researcher conducts a study that indicates the vaccine causes RAGE among 1/1,000 persons vaccinated. The researcher realizes that if the findings are shared, it might cause panic.



Pharmaceutical executive

An analyst has provided information that the price of the vaccine must be raised by \$2,500 per dose to recoup research costs. Certain communities will be unable to afford the vaccine, but continuing to offer it at a reduced rate will bankrupt the pharmaceutical company.



Journalist

You have discovered that a major research study reveals the vaccine causes RAGE among 1/1,000 persons vaccinated, and was suppressed because of fear that it would cause panic over the vaccine and lead to certain persons joining the anti-vaccination movement. Public health officials are concerned that if the information were to become publically available, it would hurt public trust and cause numerous persons to join the anti-vaccination movement, with potentially disastrous consequences.



Cruise Ship Quarantine Officer

On your ship, two persons have been infected and have been confined to their rooms in isolation. Passengers are worried about infected persons leaving their rooms and want to leave the ship. RAGE has an incubation period of 2–5 days, and you can only be sure they have not been exposed if you wait for 5 days. Thus, all passengers are quarantined to the ship. Certain persons advise that all passengers should also be isolated to their rooms. Adequate water is available, but food supplies are dwindling and waste management systems are failing.

Wild Cards



Researcher

A researcher conducts a study that indicates the vaccine causes RAGE among 1/1,000 persons vaccinated. The researcher realizes that if the findings are shared, it might cause panic.



Pharmaceutical executive

An analyst has provided information that the price of the vaccine must be raised by \$2,500 per dose to recoup research costs. Certain communities will be unable to afford the vaccine, but continuing to offer it at a reduced rate will bankrupt the pharmaceutical company.



Judge

A lawsuit has been filed by the anti-vaccination groups against state public health officials who have started a mandatory vaccination program. The anti-vaccination groups allege that being forced to take the vaccine for the public good violates their civil liberties. Your decision will be the benchmark for handling future mandatory RAGE vaccination.



Attorney

You have been asked to represent a former BioZXPharma worker who filed a philosophical exemption and did not receive the vaccine. While distributing vaccine doses to local communities, the worker contracted RAGE. His family believes that despite having refused the vaccine, BioZXPharma still had an obligation to maintain worker safety.

Wild Cards



Researcher

A researcher conducts a study that indicates the vaccine causes RAGE among 1/1,000 persons vaccinated. The researcher realizes that if the findings are shared, it might cause panic.



Pharmaceutical executive

An analyst has provided information that the price of the vaccine must be raised by \$2,500 per dose to recoup research costs. Certain communities will be unable to afford the vaccine, but continuing to offer it at a reduced rate will bankrupt the pharmaceutical company.



RAGE Family Member

A family member of yours has contracted RAGE and is in an isolation area. You are concerned that the danger of transmission might be exaggerated, and your loved one might need care. At the same time, you are being warned by public health officials that entering the isolation area is prohibited and extremely dangerous.



Make your own

Appendix 5: Assessment 2: RAGE Outbreak — Exit Ticket

**RAGE Outbreak
Exit Ticket**

Name: _____

Date: _____

Directions: Complete the exit ticket on your own.

Exit Ticket	Name of Stakeholder With Strongest Statement
Justify which of the stakeholders in your community public health meeting had the strongest statement.	Justification