

Lesson 3: Scarcity, Ethics, and Societal Choices

Big Ideas of the Lesson

- When faced with the problem of scarcity, other factors may influence the choices people make in addition to the opportunity cost.
- Sometimes social and ethical concerns play a role in economic decision-making.
- A strict marginal analysis approach may not always be preferred when there are other social and/or ethical factors that societies, groups, and individuals value and want to consider in economic decision-making.

Lesson Abstract:

This lesson uses the example of liver transplants to provide students with practice in applying their decision-making skills. Although hospitals, doctors, and advisory boards establish the criteria for allocating the available organs, students will attempt to apply marginal analysis to decide who will receive a liver transplant demonstrating how rational decision makers think at the margin. However, because the decision involves a life or death matter (getting a much needed liver), students may grapple with the limitations of a strict marginal analysis approach. Ethical and emotional factors appropriately complicate economic decision-making.

Content Expectations: E1.1.1; E4.1.5

Common Core Standards: RH.9-10.4; RH.9-10.7; WHST.9-10.1a

Key Concepts: choice, economic social goals, marginal analysis, scarcity

Teacher Notes:

- This lesson requires students to have a spiral bound notebook to use as their “Decision-Making Notebook” throughout the course. Students will use this notebook to write reflectively and for “writing to learn” exercises embedded in throughout the course.
- A guide to how hospitals actually decide organ transplant recipients is explained at the United Network for Organ Sharing website: <http://www.transplantliving.org/before-the-transplant/about-organ-allocation/matching-organs/>. For a quick reference, see “**Matching Donor Organs with Transplant Candidates**” sheet located in *Supplemental Materials (Lesson 3, Unit 1)*.

Lesson Sequence

1. Begin the lesson by having students engage in a stop and jot in response to the following question: “What does it mean to make a decision at the margin?” Have students turn and talk and then elicit a few examples to ensure student understanding of marginal analysis.

Teacher Note: This is intended as a formative assessment of student understanding of the previous lesson on marginal analysis. If students are struggling with the question, remind them of the examples from the previous lesson such as “favorite band or economics test,” “buy a new outfit or buy gas for my car,” “clean the house or mad parents,” etc.

2. Explain to students that in addition to individuals thinking at the margins, groups of people including businesses, organizations, and societies also try to make decisions by thinking at the margins. It is easier for individuals to make a decision at the margins using just economic factors than a group of

people, who may have a variety of different values that may influence the choice. Other factors, such as ethical concerns, personal values, and even different beliefs about economic costs and benefits, make it challenging for groups to arrive at a consensus. As a result, groups often select criteria to use in helping them reach a consensus in decision-making.

Explain to students that one example of this occurs when someone needs a transplanted organ. Hospitals, doctors, and advisory boards establish the criteria for allocating the available organs. These criteria may include additional factors beyond a pure marginal analysis. Tell students that in this lesson they will consider some of these other factors that play a role in economic analysis by taking on the role of members of a surgical transplant team.

3. Divide the class into surgical teams of no more than three students per team. Distribute “**Rationing Transplants: An Ethical-Economic-Societal Choice**” handout located in the *Supplemental Materials (Lesson 3, Unit 1)*. Read aloud or have students read silently the descriptions of the “potential liver transplant recipients.” Answer any clarification questions they may have.

Have students use marginal analysis to decide which patient will receive a liver transplant. Remind students that each team will thoroughly discuss how the survival of each candidate would impact society by brainstorming as many benefits and costs that they can think of and filling in the cost-benefit matrices. A sample answer sheet is contained in the *Supplemental Materials (Unit 1, Lesson 3)*.

Teacher Note: The descriptions of the potential recipients are tailored to influence students to consider emotional or ethical factors in their decision making, which violates the concept of strict marginal analysis. For instance, after filling out the cost-benefit matrices, students may feel compelled to provide the liver to the 25 year old father although his survival, compared to the other two, is not marginally beneficial to his family, the community or the economy. Such ambivalence and struggle is perfectly acceptable for this exercise. The goal is to demonstrate how social and ethical issues can conflict with a pure marginal analysis.

Once the surgical teams have listed all of the benefits and costs for each candidate they should decide which candidate will receive the transplant and answer the questions that follow.

Teacher Note: In regard to the question, “Did your group violate the concept of thinking at the margin? Explain.” This question relates back to the opening article about marginal analysis. One possible answer might be that they did violate the concept of thinking at the margin because they considered sunk costs (the liver transplant waiting period) or emotional factors (empathy for the young 25 year old father) in their decision making process instead of only considering the marginal benefits and marginal costs. Under a strict interpretation of marginal analysis, let students know that they should not have considered sunk costs or emotional factors in their decision.

4. Have the groups share the results of their analysis. Debrief the activity by discussing the following questions with the whole class:
 - What principles did you use to determine who was awarded the liver transplant?
 - Was their disagreement within your group? How so? How did you resolve the differences?
 - What role, if any, did emotion or ethical considerations play in your choice? Why?
 - What other ways besides marginal analysis may be used to determine who receives organs? Would these be more or less preferable? Why or why not?
5. Remind students that scarcity forces individuals, firms (organizations), and governments to make choices. Explain to students that the medical community actually uses a variety of criteria to decide

how organ transplant recipients are selected, either by summarizing what is on the handout **“Matching Donor Organs with Transplant Candidates”** sheet located in *Supplemental Materials (Lesson 3, Unit 1)* or by projecting the handout for the class.

6. Prior to this step, be sure each student has obtained a spiral bound notebook for the class. Explain to students that during this course they will be writing informally and reflectively to help them learn. Explain to students that you will be referring to this notebook throughout the course as their “Decision-Making Notebook.” Conclude the lesson by having students engage in a reflective writing exercise using their Decision-Making notebook. Students should write a response to the following prompt: Share a decision you made with your family, classmates, or some other group to which you belong. What non-economic factors may influence your decision making?

Resource Section

Content Expectations:

- E1.1.1:** Scarcity, Choice, Opportunity Costs, and Comparative Advantage – Using examples, explain how scarcity, choice, opportunity costs affect decisions that households, businesses, and governments make in the market place and explain how comparative advantage creates gains from trade.
- E4.1.5:** Personal Decisions – Use a decision-making model (e.g., stating a problem, listing alternatives, establishing criteria, weighing options, making the decision, and evaluating the result) to evaluate the different aspects of personal finance including careers, savings and investing tools, and different forms of income generation.

Common Core State Standards for Literacy in History/Social Studies:

- RH.9-10.4:** Determine the meaning of words and phrases as they are used in a text, including vocabulary describing political, social, or economic aspects of history/social science.
- RH.9-10.7:** Integrate quantitative or technical analysis (e.g., charts, research data) with qualitative analysis in print or digital text.
- WHST.9-10.1a:** Introduce precise claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that establishes clear relationships among the claim(s), counterclaims, reasons, and evidence.

Instructional Resources

Equipment/Manipulative

Computer with projector display

Student Resource

Decision-Making Notebook.

Gustafson, Kathryn, Brian Pierce and Scott Warrow. *Supplemental Materials (Lesson 3, Unit 1)*. Teacher-made materials. Oakland Schools, 2014.

Teacher Resource

“Matching Organs.” Transplant Living. Unos. 8 July 2014 <<http://www.transplantliving.org/before-the-transplant/about-organ-allocation/matching-organs/>>.