

Visual 9.1 Organ Transplant Market: Quantity Demanded Exceeds Quantity Supplied

Federal law prohibits buying and selling organs for transplant.

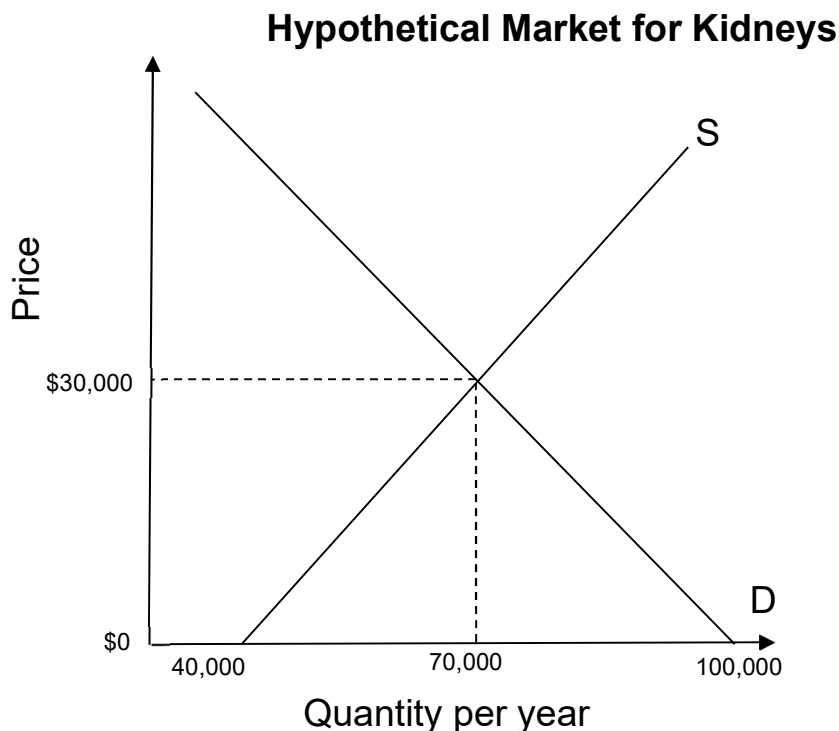
In 2022:

- Doctors transplanted more than 42,800 organs in the United States—setting an annual record.
 - More than 34,000 from deceased donors and about 6500 from living donors
- As of April 2023, there are currently over 103,000 patients on the waiting list (all organs).
 - Nearly 89,000 for a kidney, over 10,000 for a liver, and almost 3,400 waiting for a heart
- Around 8000 patients die every year while waiting for a transplant. That is about 22 people per day and almost one an hour.

The waiting list for transplants increased at twice the rate of donations.

Survival rates for transplant recipients continued to increase.

If people were allowed to buy and sell organs, here's what a **hypothetical** supply and demand curves for kidneys would look like.



Source: U.S. Organ Procurement and Transplantation Network, administered by the United Network for Organ Sharing. More recent data are available at <https://optn.transplant.hrsa.gov/data/view-data-reports/national-data/> (for simplicity numbers in the graph were rounded based on 2022 data)

Activity 9.1: Kidney Candidates

Your task: You are the leader of a Transplant Team, as the leader you must decide who gets a kidney. Using any of the criteria listed below or criteria you came up with on your own, select one (1) patient for a kidney transplant. **Assume that all suffer equally, and the matter is urgent. They are all a match to the available kidney. Those who do not receive a kidney will die within a year.**

List of criteria for consideration: **their need, merit, contribution to society (past or present), their ability to pay, their age, or some other criteria.**

Mateus

24-year-old man. He is unmarried but his girlfriend is expecting their first child soon. Currently in law school working on a degree in immigration law with the goal to assist refugees to safely and quickly becoming citizens. The reason for kidney failure is unknown. He will have about \$250,000 in debt between undergrad and law school. Potential yearly income once he graduates: \$105,000 with potential lifetime earnings: \$4,932,000. Health Insurance: Currently through the Health Insurance Marketplace with the hope of having insurance with his law firm when he graduates in 2 years.

Sybil

18-year-old woman. She is graduating from high school this spring with a 3.89 GPA. She was accepted at Arizona State University to become a high school social studies teacher but with the news of her kidney cancer diagnosis she has decided to stay in Oklahoma and attend her local community college then state school. She lives with her parents. Potential yearly income: \$56,000. Potential lifetime earnings: \$993,023. Health Insurance: Through her parents' health insurance.

Francis

79-year-old man. Retired airline pilot who was making around \$150,000 at the end of his career. He has about \$6,000,000 between social security, pension, and personal savings. He and his wife drive every two months from Virginia to Georgia to visit their son's family including three grandsons. His kidney failure is due to an incurable kidney disease. Health Insurance: Medicare.

Edwina

37-year-old woman with three kids ages 4-12 years old. Her husband passed away 2 years ago due to an unexpected heart attack. She is a pediatric nurse working the overnight shift while her sister stays at home while her kids sleep at night. Her kidney failure is a result of a hereditary condition. Present yearly income: \$77,000. Potential lifetime earnings: \$2,802,000. Health insurance: Through her employer.

Johana

50-year-old woman living with her wife and two high school aged kids. She runs a non-profit that focuses on providing services, food, clothing, and other necessities to women in need. She has been taking medicine for about five years to help manage her high blood pressure and type II diabetes. Present yearly income: \$68,000 plus \$72,000 from wife's job. Potential lifetime earnings: \$5,340,000 Health Insurance: Through the Health Insurance Marketplace but her kids are on her wife's insurance.

Felix

30-year-old man who has been living in a homeless shelter for the last few weeks. Currently unemployed and was let go from his contractor job when he was late for work after his car broke down for the fifth time that month. The reason for kidney failure is unknown. He has less than \$1000 in cash with him and no prospects for a job without reliable transportation. Health Insurance: None.

Activity 9.2 A Market for Kidneys⁷

Name _____

Federal law prohibits buying and selling organs for transplant.

In 2022:

- Doctors transplanted more than 42,800 organs in the United States—setting an annual record.
 - More than 34,000 from deceased donors and about 6500 from living donors
- As of April 2023, there are currently over 103,000 patients on the waiting list (all organs).
 - Nearly 89,000 for a kidney, over 10,000 for a liver, and almost 3,400 waiting for a heart
- Around 8000 patients die every year while waiting for a transplant. That is about 22 people per day and almost one an hour.

The waiting list for transplants increases at twice the rate of donations.

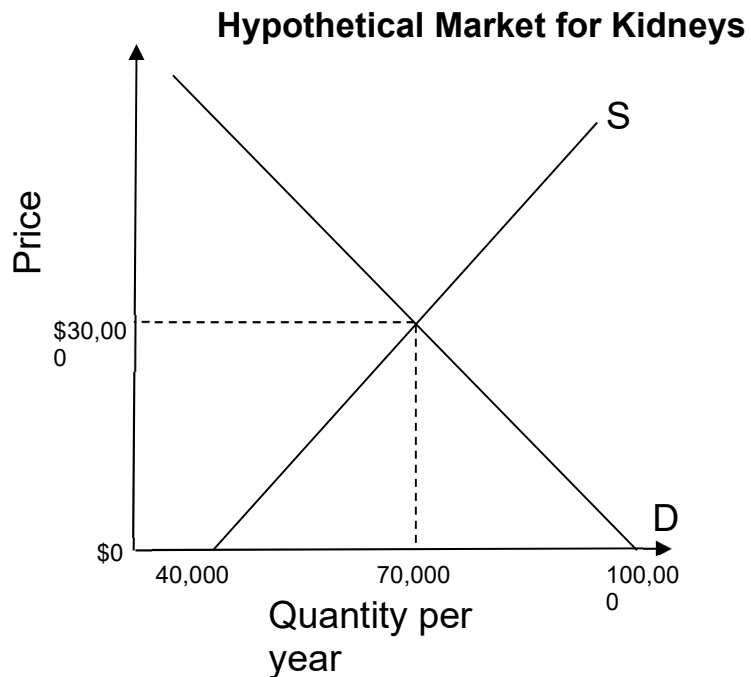
Survival rates for transplant recipients continued to increase.

Kidneys are supplied for transplant in two ways:

1. through people dying, or
2. through living people giving up a kidney. Everyone has two kidneys and can survive on just one. Kidneys from living people are generally higher quality, and transplants with these kidneys tend to be more successful.

Answer the following questions **based on the graph**, your economic knowledge, and ethics.

If people were allowed to buy and sell organs, here's what a **hypothetical** supply and demand curves for kidneys would look like:



⁷ Data for the graph came from the U.S. Organ Procurement and Transplantation Network, administered by the United Network for Organ Sharing. More recent data are available at <https://optn.transplant.hrsa.gov/data/>. For simplicity numbers were rounded based on 2022 data.

9. Assuming all other factors are constant, would an open market for kidneys result in more or fewer kidney-related deaths each year?

Fewer kidney-related deaths. Before there were 100,000 kidneys needed but only 40,000 supplied so 60,000 people were without a kidney. After there is an open market there is no shortage but there are people who are priced out of getting a kidney because they have to pay somehow (insurance, cash, etc.). Therefore, assuming there are still 100,000 people who need a kidney transplant there are 70,000 kidneys supplied, meaning only 30,000 people go without a kidney due to lack of being able to pay for it.

10. Would an open market in kidneys be equitable among people with different incomes? Argue both sides of this issue.

Answers may vary but could include: There would be fewer kidney-related deaths so there would likely be fewer poor people who are left without a kidney. However, with the open market and kidneys costing \$30,000 that would require either insurance or cash to pay for the kidney. People with lower income may not have a job that has insurance that could allow them to get the kidney or if they had to pay cash, they simply do not have cash to do so.

Activity 9.3: The Ethics of the Kidney Market ANSWERS

Outcome-based ethics: a moral philosophy that discerns right or wrong action based on the consequences produced by the action.

Virtue-based ethics: a moral philosophy that discerns right or wrong based on whether one's actions contribute to the formation of good character.

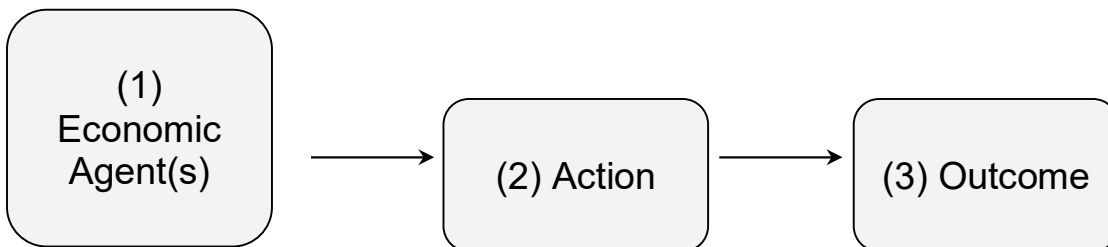
Duty-based ethics: a moral philosophy that discerns right or wrong based on the analysis of one's obligations.

1. In the space below, explain the ethical and economic issue of a donation only policy for kidneys. What are 2-3 relevant facts about the situation?

Answers will vary but may include: *there's not enough kidneys for people who need it or some people might die waiting for a kidney. Note to the students that this is a major ethical and economic issue of a donation only policy.*

2. In the space below, explain the ethical and economic issue of an open market policy for kidneys. What are 2-3 relevant facts about the situation?

Answers will vary but may include: *People who cannot buy a kidney might still die so it's not equal for people with lower income or those who cannot pay, there might be people who harm others for their kidney to make money, there might be a black market for buying and selling organs, etc. Note to the students that this is a major ethical and economic issue of an open market policy.*



In all decisions, an *economic agent* takes an *action* (or makes a choice) that is expected to produce certain *outcomes*.

3. Who is making the choice for how to decide who gets a kidney (economic agent(s))?
Answers will vary but may include: *Government, doctors, The Health Resources and Services Administration (HRSA), Centers for Medicare and Medicaid Services (CMS), or Centers for Disease Control and Prevention (CDC).*
4. What outcomes do they hope to achieve with a kidney policy like donation only or open market (outcome)?
Answers will vary but may include: *saving as many lives as possible, having more kidneys available for people who need it, etc.*

Activity 9.4: The Ethics of the Kidney Market–Economic and Ethical Decision ANSWERS

Discuss and answer the questions in the table for each type of framework based on the discussion from class. Be sure to expand upon the ideas that were previously brought up or come up with your own new ideas. **Then circle the policy (Donation only or Open Market)** that you feel does the best job at answering that question ethically.

<p>Outcome-Based Ethics <i>“Whose and which outcomes matter most?”</i></p>	
<p>Donation only</p> <p><i>Answers may vary but include: People should have more of a choice about donating their organs and not forced or incentivized with money.</i></p>	<p>Open Market</p> <p><i>Answers may vary but include: There will likely be more kidneys available so there will be more people saved from kidney failure.</i></p>
<p>Virtue-based ethics <i>“Does this contribute to the formation of good character and virtues?”</i></p>	
<p>Donation only</p> <p><i>Answers may vary but include: people have to do this out of the goodness or kindness of their heart showing they have good character.</i></p>	<p>Open Market</p> <p><i>Answers may vary but include: people are getting paid to give their kidney so they are not doing it out of kindness but to get something for themselves.</i></p>
<p>Duty-based ethics <i>“What are the rules to follow (either formal or informal)?”</i></p>	
<p>Donation only</p> <p><i>Answers may vary but include: there is no money incentive so people will likely not break laws or hurt others to get a kidney.</i></p>	<p>Open Market</p> <p><i>Answers may vary but include: there will be a formal market set up with regulations and rules from some governing body. There might be some illegal or black markets forming because of the monetary incentive so innocent people could get hurt.</i></p>

Based on your work and discussion with your partner explain how the three ethical frameworks can help you make a more ethical economic decision. Include in your answer a policy or decision recommendation.

Assessment 9.1 Policy for a More Ethical Allocation of Organs

Pretend you are leading the team of experts for the Organ Procurement and Transplantation Network (OPTN)⁸ to create a policy that should be adopted to allocate kidneys. Your team must present to a panel of leaders with OPTN and you are to share your expert opinion based on the ethics and ethical frameworks we've discussed in class. Create a visually appealing infographic⁹ that you could share with the panel. On that infographic please be sure to answer the following questions:

1. What policy are you proposing to allocate kidneys? Make sure this is the title of your infographic and your panel does not have to hunt for this.
2. What are the most important outcomes you are hoping to achieve (e.g., safety of procedure, number of donations, lives saved, etc.)?
3. Thinking about the outcome-based ethics framework related to your allocation method, whose and which outcomes matter most?
4. Thinking about the virtue-based ethics framework related to your allocation method, does this contribute to the formation of good character and virtues?
5. Thinking about the duty-based ethics framework related to your allocation method, what are the rules to follow (either formal or informal)?
6. In what ways do you think this improves upon the two allocation methods and policies (donation only or open market) discussed during the lesson?

Creating your Infographic¹⁰

What is an infographic?

A chart, graph, or other image accompanied by minimal text to give an easily understood overview of a complex subject. It should be visually striking using illustrations and graphic elements rather than large blocks of text to share information to a person or group of people.

Some tips for creating an infographic:

- Write a catchy headline—for you this should be your policy. Make sure it's large and catches people's attention and gives them a bit of information about what you are sharing.
- Keep the infographic clean without a lot of elements. Do not use large amounts of text or distracting images. Use visual elements to communicate rather than large amounts of text.
- Bullet points can be helpful; but keep them brief.
- Use color but make sure they are not distracting and complement each other.
- Your infographic should flow like a story and bring the reader's attention from top to bottom and beginning to end.
- Make sure you choose fonts that are easy to read and are large (especially if you have to present this to your classmates or the panel of experts in some way)
- Cite your sources where appropriate!

⁸ <https://www.organdonor.gov/about-us/legislation-policy/optn>

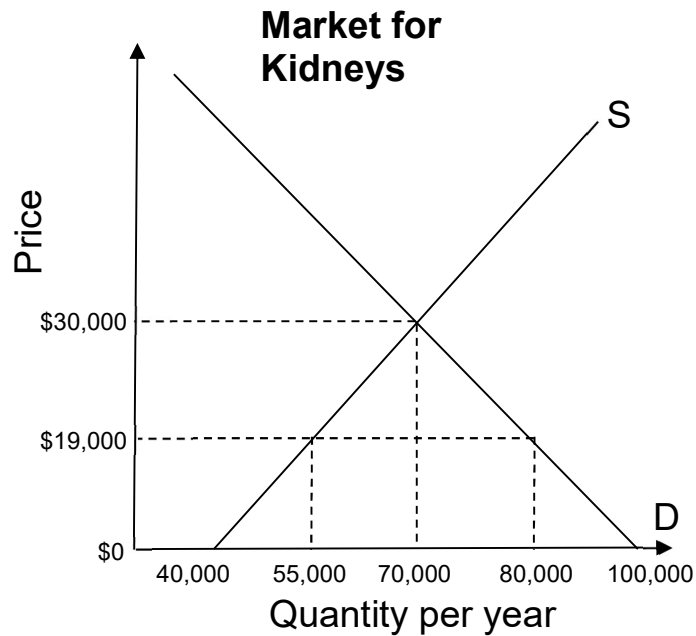
⁹ Tools like [Canva](#) can be a good place to start but feel free to use whatever program you like.

¹⁰ Tips and information can be found online including [here](#).

Assessment 9.2

Some sample assessment items:

1. Use the following fictitious graph about the kidney market to answer the question.



Suppose the government increases the price ceiling from \$0 and allows up to \$19,000 for kidneys. How much does that reduce the shortage of kidneys?

- a. 25,000
 - b. 35,000
 - c. 60,000
 - d. 55,000
2. Creating a policy for organ transplants that would save the largest number of human lives would likely follow which ethical framework?
 - a. Virtue-based ethics
 - b. Duty-based ethics
 - c. Justice-based ethics
 - d. Outcome-based ethics