

Teaching Vaccine Economics Everywhere

Syllabus

Health Economics for Vaccines

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Synopsis

The process of creating vaccines, manufacturing, distributing, and injecting them into individuals is a complex process requiring multiple decisions by multiple groups and individuals. On the supply side there are pharmaceutical companies, regulatory authorities, distributors, and thousands of health care workers who have to make strategic choices. On the demand side there are parents, relatives, friends, and their social network who have to choose to receive a vaccine and the scheduled boosters. After they receive a vaccine, they may or may not change their exposure to risks of disease.

The field of economics can be helpful at understanding decisions related to supply and demand. Economics focusses on choice under uncertainty. This class will review the relevant components of economics that can help inform decisions that drive the supply and demand for vaccines. There is a common misconception that economics is only relevant to goods that trade on the private market—and vaccines are heavily subsidized and provided publicly in most cases. However, the principles of supply and demand still apply to publicly provided goods and the economic principles are enriched by the need to understand how these private decision impact the entire public.

Goals: The goal is to understand how the principles of economics apply to the supply and demand for vaccines.

Objectives: Upon completing this course students will be able to

1. Explain economic terms and how to use them for planning and decisions
2. Explain health system building blocks and their interconnections
3. Apply economic tools to understand what determines price
4. Explain government subsidies and their role in health care delivery
5. Identify determinants of demand for health products and its determinants
6. Identify how public health programs like vaccines fit with universal health coverage
7. Apply the fundamental principles of health insurance to vaccine delivery
8. Appraise the role of the government in health and healthcare
9. Summarize how healthcare systems and health policies change as medical technology advances and costs rise
10. Analyze the economics of health policies designed to expand universal health coverage, improve quality, and contain costs

11. Appraise the interplay of public and private sectors in health
12. Discuss the economic challenges regarding that arise regarding the global availability and the country adoption of new vaccines

LECTURE TOPICS AND ASSIGNED READINGS

Session 1 Relevance of Health Economics to Vaccines

LEARNING OBJECTIVES:

1. Explain economic terms and how to use them for planning and decisions
2. Explain health system building blocks and their interconnections

EXERCISES: Drawing causal loop diagrams of vaccine coverage

CASE MATERIAL: How do I increase vaccine coverage

READINGS

1. Grossman Economic Systems
2. WHO Six Building Blocks
3. Alliance Systems Thinking for System Strengthening

OUTLINE:

1. What is an economic system?
2. Going from knowing health system building blocks to understanding the system
3. What parts of the health system are involved in vaccines?
4. How to make a health system stronger?

Session 2 The Price of Free Things

LEARNING OBJECTIVES

1. Apply economic tools to understand what determines price
2. Explain government subsidies and their role in health care delivery
3. Identify determinants of demand for health products and its determinants

EXERCISES: Worksheet to draw models of government subsidy, demand creation

OUTLINE

1. Supply and Demand and Price
2. Assumptions behind supply curve and why it slopes upwards
3. Assumptions behind demand curve and why it slopes downwards
4. Shifting supply
5. Shifting demand
6. Where do subsidies come from and how to pay for them

Session 3 Health as a (shared) investment

LEARNING OBJECTIVES

1. Identify determinants of demand for health products and its determinants
2. Identify how public health programs like vaccines fit with universal health coverage

EXERCISES: Finding externalities in health

OUTLINE

1. Health markets differ from other markets
 - a. Staying healthy can take a lot of our time
2. Health services like vaccines can be a mixed public private good
3. The free rider problem
4. Rationale for public (or private or mixed) provision
5. Communication and advocacy issues to increase demand

Session 4 – Part 1: Cost of Health Care Production And Delivery

LEARNING OBJECTIVES

Summarize how healthcare systems and health policies change as medical technology advances and costs rise

EXERCISES: Should I introduce this new vaccine?

OUTLINE

1. Why rising costs of vaccines & vaccine preventive diseases
2. Cost containment measures
3. New technologies and cost implication
4. New vaccine adoption, implications, and considerations

Session 4 – Part 2: Economics of Vaccine Delivery

LEARNING OBJECTIVES

1. Analyze the economics of health policies designed to expand universal health coverage, improve quality, and contain costs
2. Appraise the interplay of public and private sectors in health

EXERCISE: Understanding Vaccine Economics with Simulations

OUTLINE

1. Understanding how vaccine campaigns affect demand
2. Expanding vaccine coverage (routine vs outreach)
3. Financing vaccine delivery system
4. Insurance and application in vaccines