Economic characteristics of Vaccines and Immunizations

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www.who.int/immunization_financing
Outline

Key questions that an economist working in vaccinations ask her/himself?

Economic features of vaccines and vaccinations
VACCINE AND VACCINATIONS
a fabulous world for an economist...
REDUCING VPD

HUMAN RIGHTS

COMMODITY

INDUSTRY
Key questions: multidimensional

1) WHAT IS THE DISTRIBUTION OF DISEASE BURDEN/VPD?

2) WHAT ARE THE PRIORITIES?

3) WHAT ARE THE MOST COST EFFECTIVE INTERVENTIONS?

4) WHO PAYS: SOURCES AND MECHANISMS?

DATA and SITUATION ANALYSIS

PRIORITY SETTING

COST ANALYSIS

FINANCING
ECONOMICS OF IMMUNIZATION
AREAS OF WORK and CONCERNS

SUPPLY and DEMAND OF VACCINES

PRODUCTS

Vaccinations

SERVICES

AVAILABILITY

EFFICIENCY

ACCESS

VIABILITY/SUSTAINABILITY

World Health Organization
Evidence-Based Decision Making Process

1. Burden of Disease
What is the situation with mortality and morbidity of VPDs in countries?

2. Cost Effectiveness Analysis
What are the strategies that maximize outcomes for every dollar spent?

3. Supply and Procurement
Supply? Procurement?

4. Planning and Budgeting
Who is going to pay? Options and strategies for financing? Financial sustainability?

Country Context
VACCINES AND VACCINATIONS ARE DIFFERENT FROM OTHER PRODUCTS AND SERVICES
Vaccines vs Pharmaceuticals

**Vaccines**

- Focus mainly on prevention – not patients but healthy subjects
- Key role for the government agencies
- Very low acceptance of side effects

**Pharmaceuticals**

Focus on treatment – patient is generally suffering or sick
- Key role for healthcare players
- Acceptance of side effects varies by severity of disease

**Targets**

**Manufacturing**

- High manufacturing and supply chain complexity
  (*Cold Chain Management, complex biological processes*)

**Competition**

- Minimal generic competition and limited price competition
  - Very few producers
  - Major sales through government

- Number of products and generics
  - Increasing generic threat
  - Significant sales force and transaction costs
  - Sales through physician as prescriber
Vaccine: Economic characteristics...

- **Strategic product**: part of national and global security concern
- **Life saving product**: one of most cost effective interventions
- **Induced demand and consumption**: role of national and international health agencies and of health professionals
- **Highly regulated** (R&D, product, import, export and distribution,..) : entry barriers.
- **Public Funding** in most countries: Role of GoV and global community in R&D and access
Vaccine: Economic characteristics...(2)

- **Vaccine manufacturing is capital intensive**
  - Technology
  - Expertise and know how
  - High GMP standards

- **Vaccine manufacturing is a risky business**
  - Risk aversion: healthy and vulnerable people
  - Biological products
  - Clinical trials requirements
  - Stringent regulation

- **Economy of scale**, investment capacity and risk management are key

Few players both on supply and demand side
Benefits of vaccines and vaccinations

- Positive Externalities: Vaccination has positive effect beyond individuals and provides indirect benefits to the unvaccinated

- Rationale for compulsory vaccination against infectious diseases?

- Most health economic evaluations of childhood vaccination only capture the health and short term economic benefits

- Measuring broader, long-term economic effects of vaccination provide a more complete picture of the value of vaccines.
Immunization is an investment with a broad economic impact

- Immunization is a public health priority at national as well as at global level: MDGs, DoV/GVAP

- Immunization is an international **public good**: multiple positive externalities. Collective benefit goes well beyond mortality and morbidity reduction.

- Immunization is one of the most cost effective health interventions

- Immunization should be seen as an investment
If you want to know more: Immunization Financing Website

www.who.int/immunization_financing