

# Stated Preferences: A Valuable Method

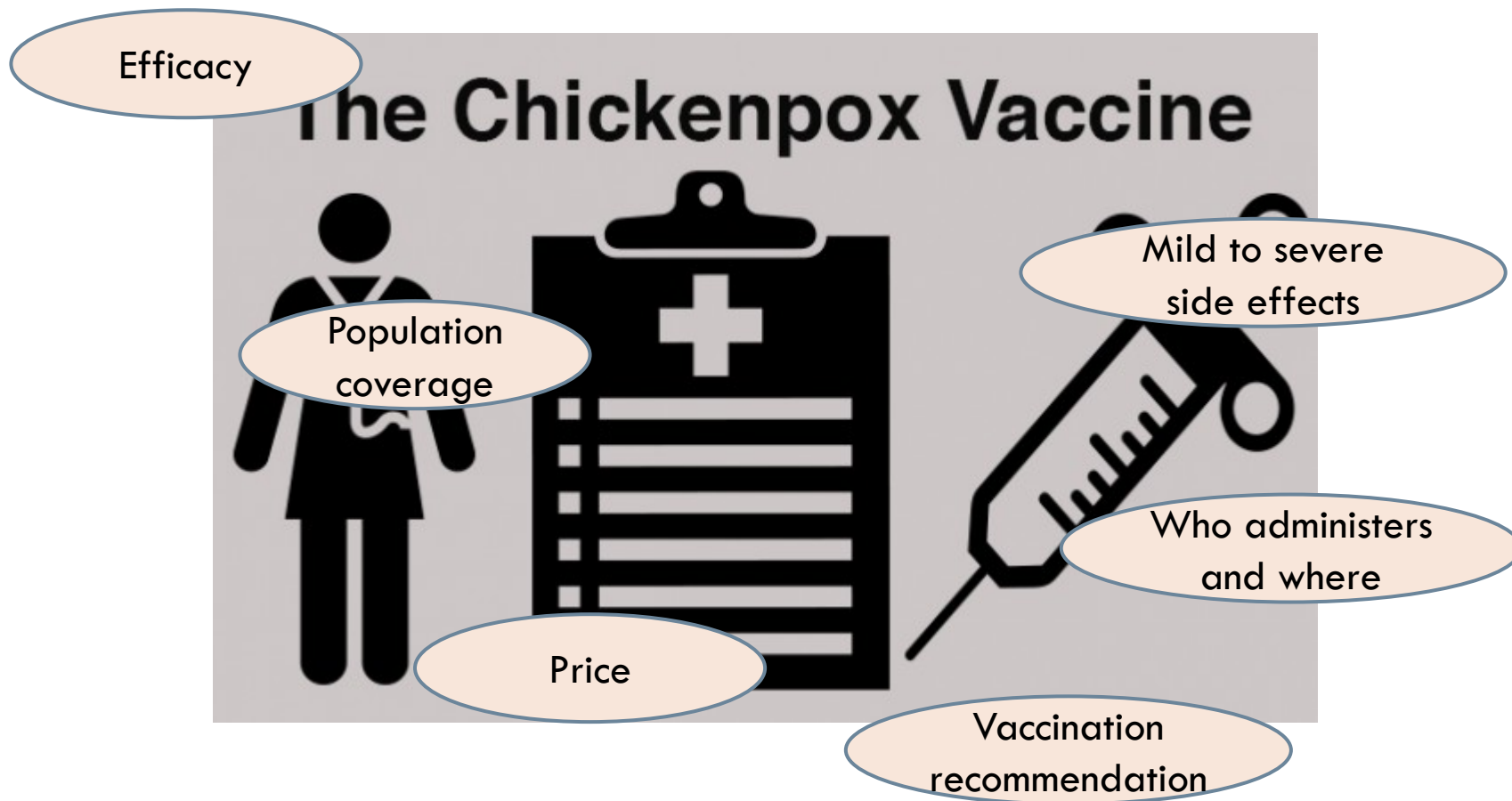
# Understanding choices

- The number and type of services used determines the resources consumed (ie **costs**)
- **Service use** occurs as a result of one or more interactions between a consumer (patient) and provider/s
- We can sometimes observe the outcome of this decision (ie what is chosen-”revealed preferences”) but we don’t observe the **factors that influence the decision to choose**
- **What is chosen reflects the value placed on the services**
- **Understanding what is valued can inform decisions about resource allocation**
  - **what to produce, what to fund**

# Understanding choices & value

- Can explore what determines value by better understanding choices.
- Basic premise is that we choose what we expect to provide the greatest satisfaction or “utility” (ie what we value).
- To understand choices (and therefore value), we compare underlying characteristics of what’s on offer.
- All goods and services can be described by a set of characteristics (attributes) eg. Varicella vaccine.

# So many choices!



# Understanding choices

- Choice of whether to have your child vaccinated depends on its efficacy, risk of side effects, price, government recommendations, population coverage, and where the vaccine is administered.
- To understand choices:
  1. Observe multiple choices and record vaccination behaviour (revealed preference) - costly and time consuming; or
  2. Ask people to choose between different vaccination regimes using the characteristics of interest (stated preferences or discrete choice experiment) - faster access to potentially richer dataset.
- Sample choice set...

Under which of these situations would you vaccinate your child for chicken pox?

	Situation 1	Situation 2
Mild side effects	1 out of 80	1 out of 10
Severe side effects	1 out of 100,000	1 out of 100,000
No chicken pox in	99 out of 100	79 out of 100
Population coverage	99 out of 100	69 out of 100
Recommendation	Standard schedule, proof at enrollment	GP
Location	GP or school	GP only
Price	Free	\$25

Under which situation would you choose to vaccinate?

Situation 1

Situation 2

# Making Sense of Data

- Repeat choices between options tell us:
  - Ranking of factors in decision making.
  - Importance (weighting) of factors in decision making.
  - How much people would be willing to pay:
    - Overall to switch between options; or
    - To change certain aspects of an option eg to increase population coverage.
- Assess whether decision making factors vary between groups of people.

# Applying this information.

- If we are to design, fund and implement new health care programs we need to understand:
  - ▣ The factors that influence participation in a program (either by providers or users)
  - ▣ What aspects of the program are ‘valued’ – what would people give up in order to get more of?
  - ▣ Does these preferences vary depending on:
    - Sociodemographic characteristics?
    - Disease or treatment-related factors?
    - Experience factors?



# Discrete Choice Experiments (DCEs)

- Used where revealed preference (RP) are:
  - ▣ Not available (eg new services)
  - ▣ Not suitable to answer the questions
- DCEs produce data about stated preferences (SP)
- Involve survey based “choice experiments”
  - ▣ Series of hypothetical scenarios described in terms of attributes (underlying features) of service
  - ▣ Attributes varied across specified, plausible range (level)
  - ▣ Results quantify the effect of levels of each attribute (independently & together) on the probability that respondents will choose under different circumstances.

# Theoretical background

- Lancaster's theory of consumer demand
  - consumers are seeking to acquire not the product/service itself (e.g. car or train journeys) but the characteristics it contains (e.g. transport from A to B, journey time, environmental considerations etc)
- Random utility model (RUM)
  - Observed choices are result of both systematic and random component of utility
  - Extended by McFadden (1974) to the case of discrete choices from multiple options

# How Do DCEs help?

- Consistent with economic theory: choice, scarcity, trade-offs.
- Selection of attributes and levels across range of interest
- Hypothetical or non-marketed products – observe preferences over products/services that are still in development.
- Inform design of effective programs:
  - ▣ Predict coverage rate/uptake.
- Can estimate inputs for economic evaluation.

# Design

- Describe product/service in terms of attributes:
  - Qualitative research with patients/consumers invaluable
- Design:
  - Attributes are varied across a range of plausible levels.
  - Scenarios constructed from attribute/levels.
  - Experimental design used to select a sample of scenarios.

# Implementation

- Implementation:
  - ▣ Respondents answer multiple choice scenarios.
  - ▣ Patients/general community/providers – whose perspective?

# Analysis

- Modelling to identify trade-offs and relationships.
  - Which factors influence choice?
  - Value assessed in two ways:
    - Relative value of attributes assessed by coefficient estimates
    - mWTP estimated as the ratio of each attribute to that of the cost attribute (if duration included, QALY weights can be generated).

# Application.

- Interpret:
  - ▣ What are the ‘policy’ levers that can be pushed to influence choice?
  - ▣ What do the results say about uptake (predict uptake)?
  - ▣ How might this influence current/proposed policy?

# Example: AYA Cancer Tx Services

- Seeking to introduce new support services for AYA undergoing Tx for cancer
- Surveyed preferences among: AYA patients and parent/carer proxies
- Which service attributes are preferred, and how are they likely to affect utilisation?



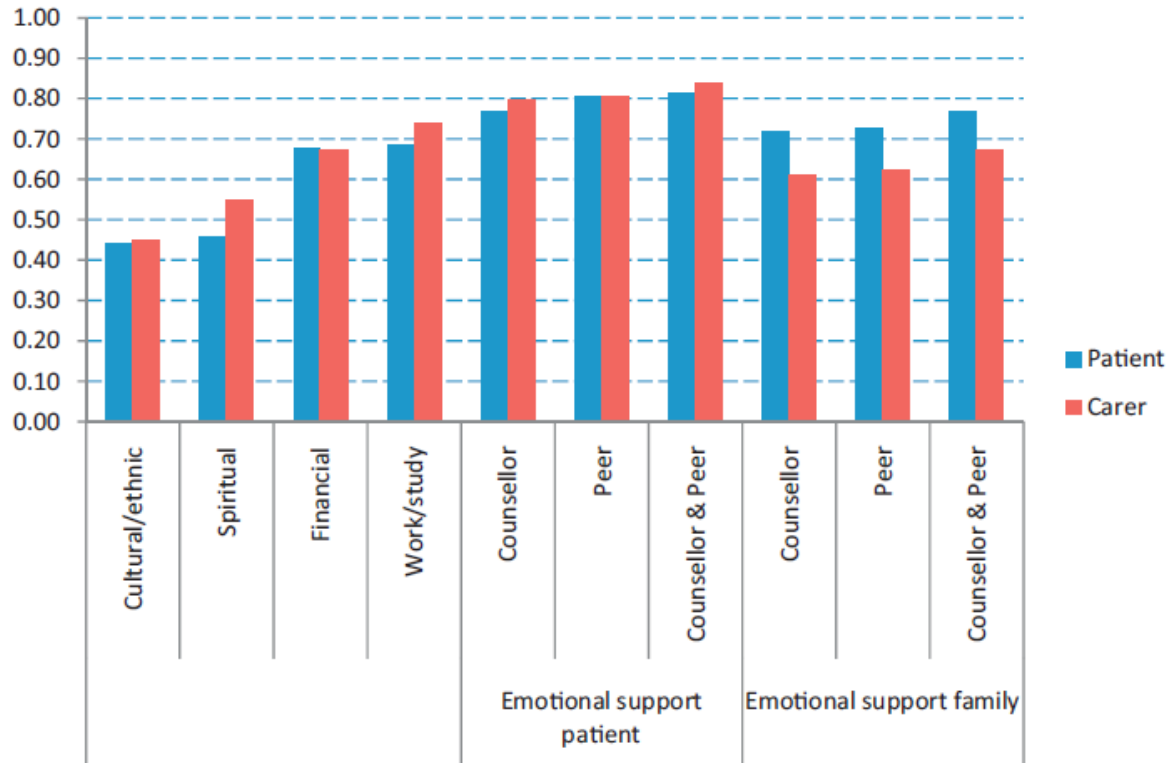
# Example: AYA Cancer Tx Service

## Attributes and levels.

Attributes	Description	Levels
Cultural/ethnic support	Whether staff discuss options regarding cultural or ethnic needs	Yes; no
Spiritual support	Whether staff discuss options regarding spiritual or religious needs	Yes; no
Financial support	Staff provide information about the availability and access of financial support	Yes; no
Returning to work/study support	Help to make your transition back to work or study much smoother. E.g. assistance with mobility, specialist teacher to help catch-up.	Yes; no
Emotional support for you (your child <sup>a</sup> )	Emotional support is offered by a counsellor/psychologist, a peer, both or neither.	None; counsellor; peer; counsellor and peer
Emotional support for (you and <sup>a</sup> ) your family	Emotional support is offered to the family by a counsellor/psychologist, a peer, both or neither.	None; counsellor; peer; counsellor and peer

<sup>a</sup> Refers to carer DCE only.

# Example: AYA Cancer Tx Service



\*The probability of choosing a support plan if the service is provided, 0.50 indicates indifference between the two plans when the service is provided.