Market Segmentation

7.1   What is market segmentation?

Market segmentation is the process of identifying different subgroups of customers on the basis that different types of customers may have different needs, which can be satisfied by different marketing or sales approaches.

Apart from simply making hypotheses on the basis of personal experience or qualitative research, or looking at cross-breaks of quantitative data, there are two main approaches which market research uses to segment markets: AID and cluster analysis.

Cluster analysis is often useful in providing a strategic understanding of an overall market (e.g. what different types of doctors exist in their overall attitudes and perceptions) whereas AID is often used at a more tactical level where there is a need to focus on a particular issue (e.g. what doctor characteristics are most predictive of uptake of a particular product).

7.2   Cluster analysis

Cluster analysis segments customers by grouping similar respondents together based on their attitudes (or any other scalar data) – it therefore is different from AID in grouping individual data rather than splitting the overall sample into discrete groups. Cluster analysis uses all the data contained in a quantitative study to group respondents, rather than segmenting on the basis of a single factor (e.g. use of a product as described above).

The outputs would be 4-8 different clusters of customers who share common attitudes, perceptions and values. **Factor analysis** is often used as a precursor to cluster analysis and provides a way of identifying the key dimensions on which respondents are differentiated. Thus, if (for example) doctors who regard efficacy as more important than tolerability are also those who believe that doctors should use the latest new treatments then these two questions may be reflective of a single underlying dimension.

Typically, factor analysis simplifies attitudes measured on 30-40 scales down to 5-6 factors which illustrate the main dimensions on which attitudes are polarised.
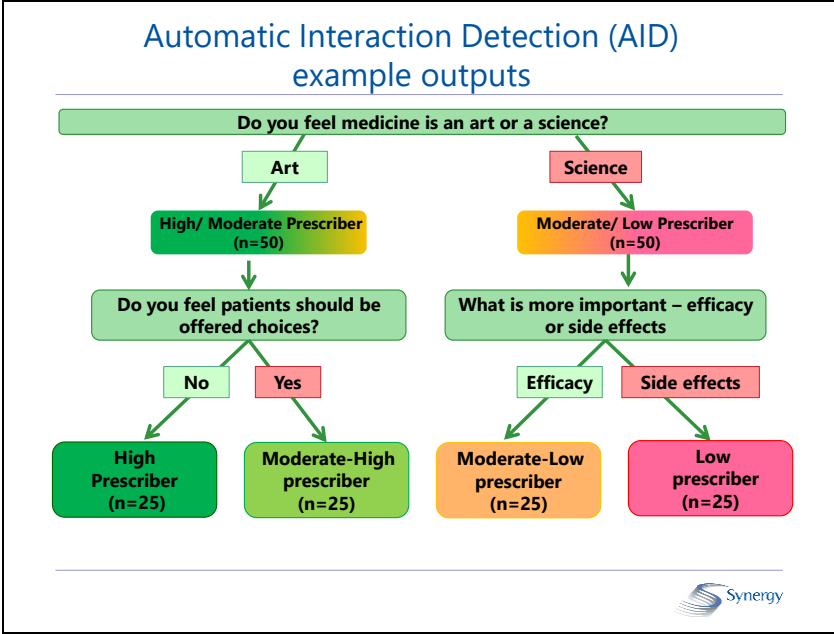
Cluster analysis example - GP segments
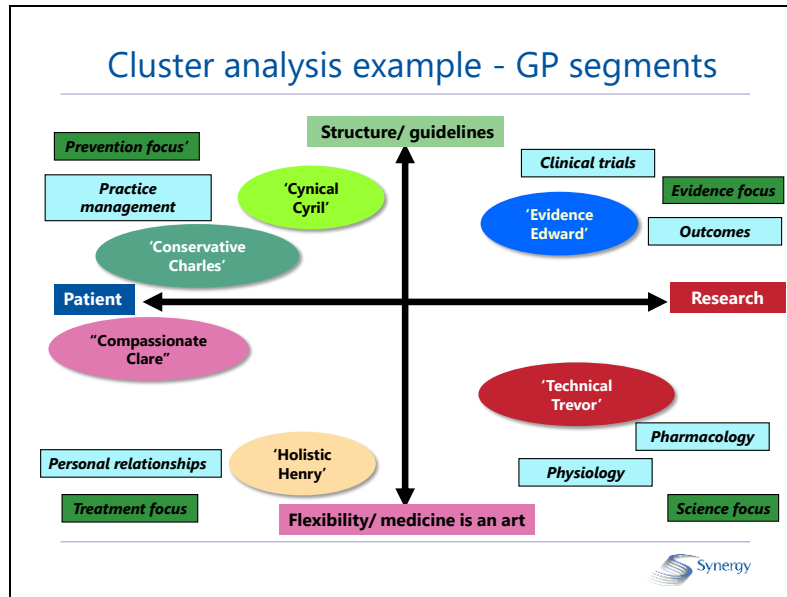
7.3 AID (Automatic Interaction Detection)

AID (Automatic Interaction Detection) is an approach whereby the analyst decides what he or she would like to segment the market by - for example, by doctors' willingness to prescribe a product. The computer-generated AID program then looks through all the data collected in a quantitative study and identifies what single factor is most strongly correlated with willingness to use the product (e.g. the most influential factor may be for the doctor to be aged under 40 who on average will use the new product in 50% of their patients, whereas those aged more than 40 many on average use the product in only 10% of patients).

The program then goes on to explore among the subgroups identified the next most important factor driving willingness to use the product (e.g. doctors under 40 who believe convenience is extremely important in choosing a treatment will use the new product in 80% of patients; while those doctors over 40 who are high users of a specific competitor will use the new product in 30% of patients).

This process is continued until a sample is reached that is too small to rely on to draw conclusions. In this way, AID can identify target subgroups with progressively increasing precision.

Automatic Interaction Detection (AID) example outputs

Do you feel medicine is an art or a science?

Art — **High/ Moderate Prescriber (n=50)**

Do you feel patients should be offered choices?
- No → **High Prescriber (n=25)**
- Yes → **Moderate-High prescriber (n=25)**

Science — **Moderate/ Low Prescriber (n=50)**

What is more important – efficacy or side effects
- Efficacy → **Moderate-Low prescriber (n=25)**
- Side effects → **Low prescriber (n=25)**

Synergy

There are a number of variants of the AID approach including CHAID, THAID, MAID and XAID each of which are different in terms of the statistical analyses involved and have different benefits and disadvantages but are essentially similar in terms of outputs.