

CUSTOMER CASE

Dyne Advanced Analytics

Médecins Sans Frontières analyse medical data with SPSS Statistics

A typical case: evaluation of an HIV programme in Cameroon with SPSS Statistics. *MSF* is researching a cohort of 150 patients taking anti-viral medication. Patient data is collected during regular visits.



About Médecins Sans Frontières

Doctors Without Borders / Médecins Sans Frontières (MSF) is a humanitarian medical aid organisation, founded by doctors and journalists in Paris in 1971. The Swiss section came into being in 1981. The headquarters are in Geneva and there is a branch for German-speaking Switzerland in Zurich. The organisation helps people in need, usually victims of natural disasters or war, regardless of their ethnic origins, religious or political beliefs. MSF Switzerland supports dozens of projects in over 20 countries. More than 300 people, supported by around 1,200 local workers, are on the ground to implement help projects. In Switzerland, around 60 people work for MSF.

MSF missions are above all about providing quick and efficient help on the ground. Alongside medical assistance, food and clean water must be provided, and lodgings must be built or made sanitary. In addition to crisis interventions, MSF also deals with the impact of economic and social inequality on health and implements projects to give access to life-saving medication. In 1999, MSF was awarded the Nobel Peace Prize.

How MSF collects medical data

- The medical department regularly conducts surveys on the nutritional condition of populations and on the distribution of vaccinations.
- During emergency interventions in the event of epidemics, conflicts or natural disasters, MSF assesses the health situation of the population and determines how much food, water and accommodation is required. This is often done through data collection, in order to exactly establish requirements on the ground.
- MSF is confronted with more and more situations that require monitoring: data are collected and analysed at regular intervals. This involves assessing numerous indicators, which enable a critical situation to be monitored in order to begin any direct intervention measures.
- Some programmes, such as recent HIV projects, require cohort analyses. Patients' development is tracked over several years. To assess the data and recognise long-term trends, complex multivariate statistics are also necessary.

We have
been SPSS
(Switzerland)
for 15 years.



A typical case: Evaluation of an HIV programme in Cameroon with SPSS Statistics.

MSF is researching a cohort of 150 patients taking anti-viral medication. Patient data is collected during regular visits:

- Data from clinical research
- Measurements such as the number of viruses and CD4 cells
- Information about the existence of side effects
- Documentation on prescribed treatment (type of anti-viral medication, prophylaxis against secondary infections)

The prescribing chemist fills in a questionnaire with details regarding the patient's compliance with the therapy. Every 12 months, the patients answer a psycho-social questionnaire, which contains questions on socio-demographics, quality of life, the relationship with the care team, and on individual perceptions of the illness and treatment.

The different questionnaires and clinical data sheets are opened and recompiled with SPSS Statistics software. SPSS Statistics provides MSF researchers with a series of different analyses:

- Frequency of all variables
- Construction of social science scales
- Calculation of indicators through the compilation of different variables
- Analysis of development trends, such as number of viruses and CD4 cells
- Contingency tables to determine statistically significant connections between the individual characteristics and indicators
- Determination of the epidemiological profile of observed patients
- Multivariate models, such as logistic regressions to analyse the decisive factors for the disease to progress well.

The advantages of SPSS Statistics for MSF

- One of the clear benefits of SPSS Statistics is the possibility to open data from other common formats (Excel, dBase, Lotus, text data, etc.) directly in the program and likewise to easily save SPSS data in these formats.
- The attractive program interface also allows inexperienced users to transform variables with recode and compute commands and to carry out a number of statistical evaluations. Experienced users have the possibility to automate analyses easily with the built-in syntax command language.
- Users can annotate results (tables and charts), print them individually or collectively and directly insert them in reports.
- SPSS Statistics processes data records with several hundreds of variables, without any noteworthy loss of performance in the creation of statistics. ●

MORE INFO

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