



Introduction to Logistic Regression: a CPD course

Course overview

This course examines the application of models to predict a binary response variable from categorical and continuous predictor variables. Participants will also learn to apply these methods using R software, as well as find out how to interpret their results.

Who should attend? Is it right for me?

This course is aimed at participants who require a basic understanding of logistic regression. If participants do not already have a basic understanding of statistical techniques, we recommend they also register for the three day course on statistical issues in the design and analysis of research projects.

What is the course schedule?

This course runs online. The lecture videos will be available online and can be watched at any time. A suggested schedule is given in the table below, which highlights the live sessions provided to give opportunity to ask questions. During the live practicals, materials can be worked through at the participants' own pace, but demonstrators are available to answer questions and assist with practical tasks.

What will delegates learn?

By the end of this course participants will have an understanding of:

- Understand the concepts of analysing binary data
- Have an appreciation of interpreting the complexities of this data
- Learn the principles behind logistic regression
- Know how to carry out these procedures using R

What does the course cover?

- Exploratory data analysis and how to describe your data
- The concepts of analysing binary data and interpreting odds ratios
- Model selection and interpretation of a logistic regression model
- Checking model assumptions
- Interpretation and presentation of results
- How to develop a prognostic index



Timetable

Time	Session
9:30 - 9:35	Welcome and introduction
9:35 - 10:05	Lecture 1: Model fitting (recorded video)
10:05 - 10:20	Live Q&A
10:20 - 11:15	Live R Practical 1
11:15 - 11:30	BREAK
11:30 - 12:00	Lecture 2: Model checking (recorded video)
12:00 - 12:15	Live Q&A
12:15 - 12:55	Live R Practical 2
12:55 - 13:00	Closing remarks

To find out more

Contact Thomas Spain (t.spain@liverpool.ac.uk) in the Department of Health Data Science.

Alternatively, visit the department's website at <https://www.liverpool.ac.uk/population-health/about/health-data-science/courses-and-workshops/>.

