

INTRODUCTORY MEDICAL STATISTICS COURSE

Venue: National Heart and Lung Institute, Guy Scadding Building, Dovehouse Street, London SW3 6LY

Thursday 23 to Friday 24 September 2010

PROGRAMME

<i>Date & time</i>	<i>Lecture title</i>	<i>Summary points covered</i>	<i>Presenter(s)</i>
Thursday 23 September 2010			
09.00 - 09.15	Registration and coffee		
09.15 - 10.30	Introduction to the research process: designing studies	<ul style="list-style-type: none"> - <i>experimental and observational study designs</i> - <i>confounding, power, multiple testing</i> 	Paul Cullinan Professor in Occupational and Environmental Respiratory Disease, National Heart and Lung Institute (NHLI)
10.30 - 11.30	Descriptive statistics	<ul style="list-style-type: none"> - <i>means, medians, standard deviation</i> - <i>confidence intervals</i> 	Winston Banya Medical Statistician, Royal Brompton and Harefield NHS Trust
11.30 - 11.45	<i>Tea</i>		
11.45 - 12.15	Introduction to statistical testing	<ul style="list-style-type: none"> - <i>hypothesis testing</i> - <i>"statistical significance"</i> 	Susie Upchurch Medical Statistician, NHLI
12.15 - 1.00pm	Statistical testing 1: continuous data	<ul style="list-style-type: none"> - <i>t-tests</i> - <i>non-parametric tests</i> 	Jessica Harris Lecturer and Medical Statistician, NHLI
1.00 - 2.00	<i>Lunch break</i>		
2.00 - 3.45	Statistical testing 2: continuous data	<ul style="list-style-type: none"> - <i>ANOVA, correlation</i> - <i>agreement</i> 	Jessica Harris
3.45 - 4.00	<i>Tea</i>		
4.00 - 5.00	Statistical testing 3: categorical data	<ul style="list-style-type: none"> - <i>chi-squared test</i> - <i>non-parametric tests</i> 	Susie Upchurch
5.00 - 5.30	Diagnostic tests (optional)	<ul style="list-style-type: none"> - <i>sensitivity, specificity</i> - <i>PPV, NPV, NNT</i> 	Paul Cullinan

Friday 24 September 2010			
09.00 - 09.15	Registration, coffee and selection of afternoon paper critique		
09.15 - 10.15	Data analysis demonstration	<ul style="list-style-type: none"> - <i>demonstration of topics covered on previous day</i> 	Stephanie MacNeill Medical Statistician, NHLI
10.15 - 11.15	Power and sample size	<ul style="list-style-type: none"> - <i>numbers needed to detect an effect</i> 	Susie Upchurch
11.15 - 11.30	<i>Tea</i>		
11.30 - 1.05	Interpretation of regression models 1	<ul style="list-style-type: none"> - <i>linear regression models</i> 	Stephanie MacNeill
1.05 - 2.05	<i>Lunch break</i>		
2.05 - 3.30	Interpretation of regression models 2	<ul style="list-style-type: none"> - <i>logistic regression models</i> - <i>survival analysis</i> 	Stephanie MacNeill
3.30 - 5.00	Discussion groups: group exercise and paper critique	<ul style="list-style-type: none"> - <i>study design, statistical analysis</i> - <i>interpretation</i> 	Winston Banya, Jessica Harris, Stephanie MacNeill, Susie Upchurch

Accreditation:

CPD (Royal College of Physicians) – 12 non-clinical, external points (to be sought)

National Heart and Lung Institute (Imperial College)
Occupational and Environmental Medicine, London SW3 6LR

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~ FLYER ~

Introduction: This two-day introductory course has been running successfully for five years for clinical and scientific research staff. In response to high demand, we are holding this again on 8 and 9 October 2009.

Course aims: Designed to introduce doctors, nurses, clinical research fellows and postgraduate students – anyone who requires an understanding of statistics in their work or research – to a number of statistical concepts, listed in the “Aims and Objectives” below. No prior knowledge of statistics is assumed.

AIMS AND OBJECTIVES

By the end of the two days, participants should be able to:

- Have an appreciation of the uses of statistics in research
- Understand how their research hypothesis relates to statistical null and alternative hypothesis
- Identify different data types and describe and summarise them
- Appreciate which statistical tests are appropriate for their data (two and three group scenarios)
- Assess agreement using a variety of methods
- Calculate sample sizes for basic study designs
- Understand the principles behind various forms of regression analysis
- Critically appraise statistical methodology and reported results in peer-reviewed publications

REGISTRATION – FEES and PROCEDURE

- **£225 (tbc)**, including handout and daytime refreshments/lunch
- Places are confirmed upon payment of the registration fee. Delegate numbers are limited to 50, and demand is expected to be very high.
- Places are allocated on a “first come, first served basis”
- Registration will open in Spring 2010

For further details/enquiries, please contact:

- **Administration:**
Magda Wheatley, Secretary to Professor Paul Cullinan
National Heart & Lung Institute
Occupational & Environmental Medicine
Dovehouse Street, London SW3 6LY -e-mail: m.wheatley@imperial.ac.uk - tel: 020 7351 8934
- **Enquiries specific to course content:**
Jessica Harris (Lecturer and Medical Statistician), Course Organiser
Address as above e-mail: jessica.harris@imperial.ac.uk - tel: 020 7351 8307 / 8397

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