

MERCER'S INSTITUTE FOR SUCCESSFUL AGEING,
 INTRODUCTION TO BIostatISTICS FOR HEATHCARE PROFESSIONALS
 PROGRAMME 2018

18 th May 2018	
TIME	EVENT
08.30 – 09.00	Registration
09.00 – 10.00	<p>Professor Conal Cunningham Clinical Director, Medicine for the Older Person Directorate, St James's Hospital</p> <p>Dr Robert Briggs, Research Fellow, Centre For Medical Gerontology, Trinity College Dublin</p> <p>Research methods (What is research? (Audit vs research; Qualitative vs quantitative; approaches in research; the scientific method; hypothesis generation & testing)</p> <p>Steps of the research process & defining a research question (levels of measurement/ description; data types; how we collect data)</p>
10.00 – 11.00	<p>Professor Cathal Walsh Professor of Statistics, Health Research Institute (HRI) and MACSI, University of Limerick.</p> <p>Sampling (the sample vs the population; recruitment of a sample [convenience sampling, simple random sample, stratified sampling, clustering, probability-weighted sampling])</p>
11.00 – 11.20	Tea/Coffee
11.20 – 12.20	<p>Dr Aisling O'Halloran Senior Research Fellow, The Irish Longitudinal study on Ageing (TILDA), Trinity College, Dublin</p> <p>Research Designs (cross-sectional; cohort; case-control; experimental [RCT]; quasi-experimental; causal vs correlational designs)</p>
12.20–13.20	<p>Dr Katy Tobin Biostatistician/Epidemiologist, The Irish Longitudinal study on Ageing (TILDA) & Global Brain Health Institute, Trinity College, Dublin</p> <p>Central limits theorem and measures of central tendency (normal distribution & assumptions of parametric tests; basics of histograms; measures of centrality [mean, median, mode]; measures of dispersion [variance, standard deviation, standard error]; properties of normality/deviations from normality [skew, kurtosis]; confidence intervals; p values; effect size (Cohen's d).</p>
13.20–14.00	Lunch
14.00–15.00	<p>Dr Daniel Carey Statistician, at The Irish Longitudinal study on Ageing (TILDA), Trinity College, Dublin</p> <p>Introduction to inferential statistics (one-sample t-test; independent t-test; dependent t-test; Mann-Whitney U; 2 x 2 contingency table [Chi-square; odds ratio; relative risk]; one-way ANOVA & Kruskal-Wallis)</p>
15.00–16.00	<p>Dr Belinda Hernández Bioengineer, at The Irish Longitudinal study on Ageing (TILDA), Trinity College, Dublin</p> <p>Further inferential statistics (bivariate models; correlation; linear regression; basic logistic regression; principles of multiple regression)</p>

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16.00-17.00	Dr Daniel Carey Statistician, at The Irish Longitudinal study on Ageing (TILDA), Trinity College, Dublin 1 hour tutorial. Offer attendees to submit queries for their own studies/research before the study day and divide them into tutorial groups on the study day.
17.00	Evaluation