

## Reading and general advice on how to understand statistics

There is a fair range of published information and advice for health journalists on handling statistics, not least through professional bodies (journalists' associations, statistical societies, NGOs and other organisations keen to publicise accurate information).

However journalists may well find it easier to master the skills in a face to face session in which questions can be asked and points can be further explained where necessary than online or by simply downloading texts.

### Publications:

Victor Cohn, *News and Numbers* (3<sup>rd</sup> edition Sept 2011), Wiley-Blackwell.

Ben Goldacre (2008) *Bad Science* (Harper Collins)

Centre for Investigative Journalism (City University, London) general guide to using statistics by Connie St Louis of City University, is available online

[http://issuu.com/tcij/docs/cij\\_statistics\\_for\\_journalists\\_26\\_05\\_11](http://issuu.com/tcij/docs/cij_statistics_for_journalists_26_05_11)

An easy to read guide *Sense about statistics* (by former Times health editor Nigel Hawkes, 2010) is downloadable (in English) from [www.straightstatistics.org](http://www.straightstatistics.org):

<http://www.straightstatistics.org/resources/making-sense-statistics>

A discussion article in the *New England Journal of Medicine* by Susan Dentzer

*Communicating Medical News — Pitfalls of Health Care Journalism*, N Engl J Med 2009; 360:1-3 January 1, 2009, <http://www.nejm.org/doi/full/10.1056/NEJMp0805753>

A WHO equivalent (in WHO Bulletin) *Making sense of health statistics*, Gerd Gigerenzer *Bulletin of the World Health Organization* 2009;87:567-567. doi: 10.2471/BLT.09.069872

<http://www.who.int/bulletin/volumes/87/8/09-069872/en/>

### Sources:

**BBC College of Journalism** made videos and have published slides from an education event for health journalists put on by the **Royal Statistical Society** December 1 2010.

Available (in English) <http://scijournaltraining.wordpress.com/2011/01/14/health-wellbeing-the-stats-behind-the-stories-video-and-presentations/>

(UK) Statistics on Mental Health to help balance reporting published by mental health charity MIND, available online at

[http://www.mind.org.uk/help/students\\_journalists\\_and\\_professionals](http://www.mind.org.uk/help/students_journalists_and_professionals)

Actual health statistics on OECD countries can be obtained from

[http://stats.oecd.org/index.aspx?DataSetCode=HEALTH\\_STAT](http://stats.oecd.org/index.aspx?DataSetCode=HEALTH_STAT)

More figures on European health systems are on Eurostat:

[http://epp.eurostat.ec.europa.eu/statistics\\_explained/index.php/Healthcare\\_statistics](http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Healthcare_statistics)

### Responses:

Experts in statistics or on the specialist field discussed, campaigners, or in some cases government or opposition politicians may offer an alternative take on statistics and stories based on them. It's important to take especial care with stories that could easily, if inadvertently mislead the news audience and discredit the journalist along with the information if a story is revealed to be a false reading from the figures.

**Critique:**

Ben Goldacre's 2008 book 'Bad Science' (Harper Collins) and his column in the *Guardian* newspaper have maintained a pressure for more thoughtful and critical presentation of statistics as well as scientific information.

But there is pressure in the other direction as well as the limited knowledge and skills of health journalists: the PR industry still exploits the manipulation of statistics to create the most dramatic possible stories from new findings and figures.

Journalists must beware of being used to pass on inferior information.

**Popularisation:**

The mainstream media loves a good statistic, but sub-editors and headline writers who work on stories after they are submitted may fail to understand and distort carefully crafted stories if the complexities are not carefully analysed and spelled out in everyday language for the news audience. Be sure to flag up potential misunderstandings and be ready to insist on corrections where potentially harmful errors are made.