$\chi^2 = \sum_{i=1}^{k} \frac{(O-E)^2}{E}$

Department of Biostatistics
Winthrop University Hospital

March, 2016

Announcements

Biostatistics Lecture Series: Lectures will be given at an introductory level with lots of discussion and will cover topics such as:

- o Best practices (and pitfalls) when presenting data
- o Non-parametric tests – when are they needed?
- o Interpreting all those p-values in the literature
- o How to summarize results in your abstract

Lectures will resume in April 2016. An e-mail will be sent shortly with dates, topic, and location. **Can't attend a session?** Our lecture slides are now downloadable from our department webpage.
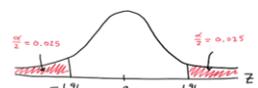
http://www.winthrop.org/lectures

NEW: Biostatistics tutorials are available online: A library of short introductory tutorials on specific topics is now online. This library will be expanding over the year, so keep checking for new tutorials.

http://www.winthrop.org/introductory-tutorials

Melissa J. Fazzari, PhD – Director
Shah Islam, PStat, MPH
Rose Calixte, PhD.

http://www.winthrop.org/biostatistics-epidemiology

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Highlighted Research - Collaboration with Winthrop Investigators:

Establishing the Learning Curve of Robotic Sacral Colpopexy in a Start-up Robotics Program.

Sharma S, Calixte R, Finamore PS.

STUDY OBJECTIVE: To determine the learning curve of the following segments of a robotic sacral colpopexy: preoperative setup, operative time, postoperative transition, and room turnover.

MEASUREMENTS AND MAIN RESULTS: Learning curves for each of the segment times of interest were created using penalized basis spline (B-spline) regression. Operative time was further analyzed using an inverse curve and sequential grouping. A total of 176 patients were eligible. Operative time was further analyzed using an inverse curve that revealed that after 11 cases the surgeon had reached 90% of the learning plateau. Sequential grouping revealed no significant improvement in operative time after 60 cases.

CONCLUSIONS: Ultimately, we believe that efficiency in operative time is attained after 30 to 60 cases when performing robotic sacral colpopexy. The learning curve for preoperative setup and postoperative transition, which is reflective of anesthesia and nursing staff, was approximately 110 cases.

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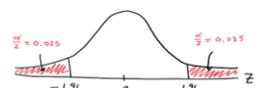
The Problem with Peer Review

The hallowed process of peer review is not all it is cracked up to be…
When a prominent medical journal ran research past other experts in the
field, it found that most of the reviewers failed to spot mistakes it had
deliberately inserted into papers, even after being told they were being
tested.

Source: The Economist, 2013

**How come the journals that publish bad studies fail to spot them in
time?**

Journal peer reviewers fail to catch the mistakes for a variety of reasons.
One that editors usually point to is that if someone is hell-bent on faking
results, there's no way for peer reviewers to catch that….But it's also true
that scientists are being asked to review more and more papers, and that
science is becoming more and more specialized. That means there are
fewer experts in any particular subject who can vet research.

*http://www.huffingtonpost.com/entry/how-one-doctor-is-waging-
war-on-bad-science_us_56cb2f54e4b0928f5a6c7aa6*

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