


THE UNIVERSITY of York




Nurses, decisions and irreducible uncertainty in practice

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Good idea bad idea?


Exercise program for hospital nurses



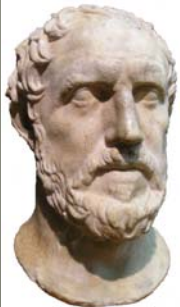
Bicycle education



Lying babies prone for sleep



On "irreducible" uncertainty



"It is impossible to calculate accurately events that are determined by chance"...

But let us not be afraid of this fact...

Thucydides: History of the Peloponnesian war.

"seeing" in healthcare

Slide from Slawson, Shaughnessy, Becker, 1999.



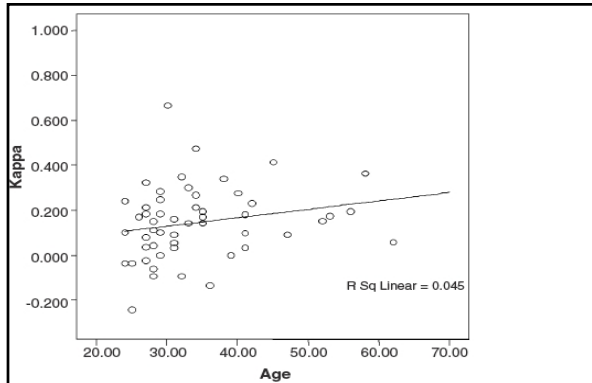
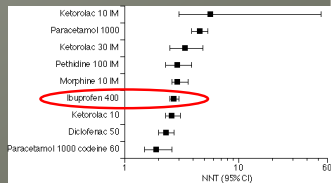
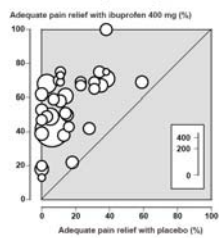


Figure 2. Scatter plot of κ values representing physician agreement with the expert panel regarding their choice for occlusive dressing plotted against their age.

uncertainty reduction via synthesis

Figure 3: Trials of ibuprofen in acute pain that are randomised, double blind, and with the same outcomes over the same time in patients with the same initial pain intensity



CINICAL EDUCATION
HOW EXPERT NURSES USE INTUITION

The seasoned nurse's well-honed sixth sense enables her to make lightning-fast decisions.

Erm...yes, about that...

There is a problem with intuition

“Whenever there is a simple error that most layman fall for there is always a slightly more sophisticated version of the same problem that experts fall for” (Amos Tversky, NY Times, 6-12-1983)

“comfortable” doesn’t make it right

“in all life one should comfort the afflicted, but verily, also, one should afflict the comfortable, and especially when they are comfortably, contentedly, even happily, wrong.” (JK Galbraith, The Guardian, 28-7-1989)

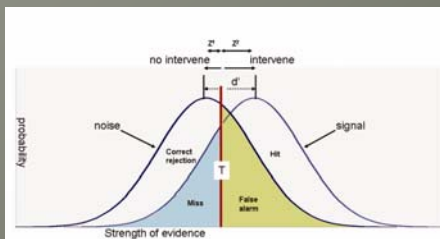
So... what of this mythical 6th sense

- are nurses as good at identifying “signals” in “noisy” clinical settings as we think?
- do we recognise our limitations and adjust our confidence accordingly?
- If not why not?

Signals and noise: risk assessment

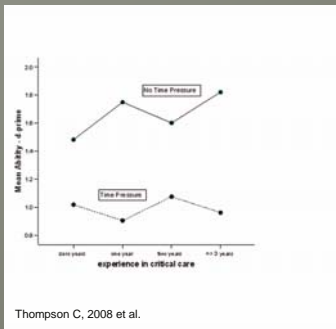
	risk	No risk
Yes	TP	FP
no	FN	TN

Signals and noise: risk assessment



Thompson C, Dalgleish L et al. The effects of time pressure and experience on nurses' risk assessment decisions: a signal detection analysis. *Nursing Research*, 2008; 57(12): 302-311

Signals and "real life" pressures



100% more likely to intervene

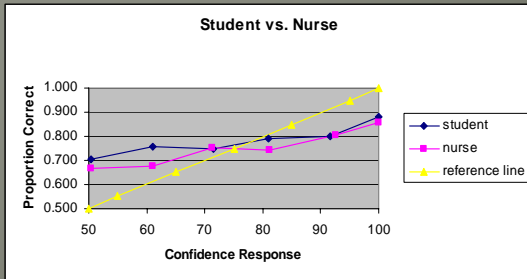
23% vs. 27% less "misses"

but

Time pressure = no benefit

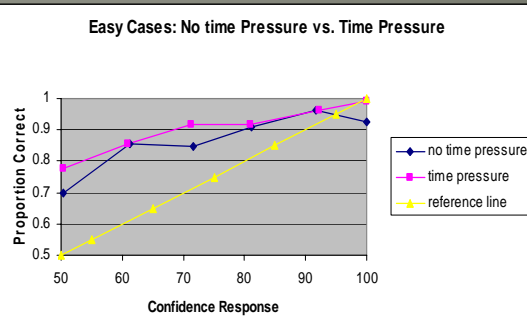
Thompson C, 2008 et al.

"I intuit therefore I am"



Huiqin Yang 2008

"singing while you're winning"



Huiqin Yang 2008

"Jerry" moment



"Restlessness and discontent are the first necessities of progress."

Thomas Eddison
