Visualising Risk

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What is the Winton programme trying to do?

Improve the public handling of quantitative aspects of risk and uncertainty, through

- Educational lectures, workshops
- The ‘Risk Roadshow’
- Website
- Engagement with media
- Working with people who want to communicate risk
- Inter-disciplinary research
What was the probability that Barack Obama would win the US election?

On the face of it this seems an odd question. After all, he won. But before the election it was uncertain whether Obama would win, and probability is the way that uncertainty is quantified, so maybe it is reasonable to ask what that probability was.

We know that there were betting odds – a betting exchange such as Intrade allows people both to accept or make bets and so converges, at any point in time, to a certain set of odds at which people are willing to be either the better or the bookmaker. This prediction market provides a ‘probability’ on Obama winning that kept changing for the year before the election – this is shown in Figure 1 with some of the main events of the year marked in.
Recently I went to see my family doctor ...
My doctor quoted me a 10% risk of heart attack or stroke in 10 years.
How to communicate this risk?

- Absolute / relative risks /NNT?
- What interpretation of probability?
- 0.8, 80% or 80 out of 100?
- Positive or negative frame?
- Pie chart, bar chart, smilies etc?
How long are you going to live?
Data source

- Human Life Table Database
- Max-Planck Institute
- http://www.lifetable.de/
Some Conclusions

- No ‘correct’ format, but known biases to avoid
- Personal preference for ‘possible futures’ as a story
- Aiming for adaptable, embeddable animations for support groups etc