An example Metropolis Beamer presentation using R Markdown compiled in the rmdmetro Docker container

Tom Palmer

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Outline

Introduction

- This is a test
    - of the Docker container

A slide with a citation

- Greenland and Pearl (2011) define collapsibility as

  When an adjustment does not alter a measure, the measure is said to be collapsible over C or invariant with respect to the adjustment. Conversely, if an adjustment alters a measure, the measure is said to be non-collapsible over C.

A slide with some maths

- Neuhaus and Jewell (1993) explained that where $f(p)$ is the link function
    - GLMs: $f(\mathbb{E}[Y]) = \eta$
    - e.g. logit link; $\log\left(\frac{p}{1-p}\right) = \eta$
- v is the conditional association between X and Y (on the scale of the linear predictor)
- Characteristic collapsibility function (CCF) $g_v(p)$, named by Daniel et al. (2020), maps $P(Y|X = 0, C)$ to $P(Y|X = 1, C)$ (e.g. part (b) of first figure)

$$\text{CCF: } g_v(p) = f^{-1}\{f(p) + v\}$$

- Take away: **A parameter is said to be non-collapsible when its CCF is non-linear**

A slide with some code and output

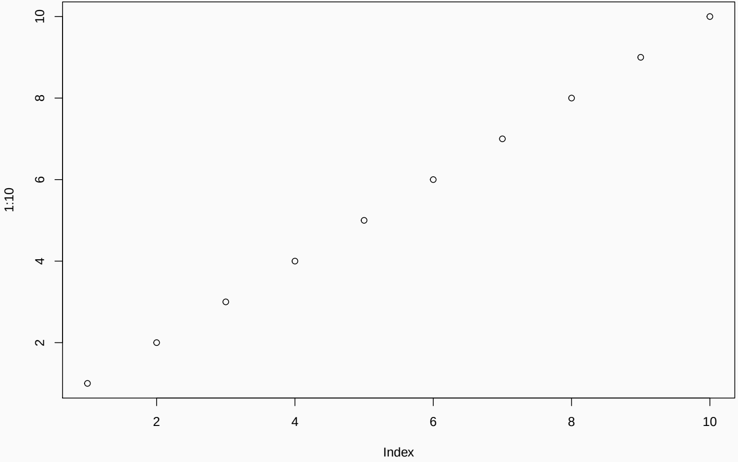
- Estimate the marginal odds ratio

```
fitor <- glm(y ~ x, data = datlong, family = binomial)
```

- A nice kable table

		2.5 %	97.5 %
(Intercept)	0.667	0.379	1.17
x	2.250	1.011	5.01

A slide with a plot



References

Daniel, R., J. Zhang, and D. Farewell. 2020. “Making apples from oranges: Comparing noncollapsible effect estimators and their standard errors after adjustment for different covariate sets.” *Biometrical Journal* n/a (n/a).

Greenland, S., and J. Pearl. 2011. “Adjustments and their Consequences—Collapsibility Analysis using Graphical Models.” *International Statistical Review* 79 (3): 401–426.

Neuhaus, J. M., and N. P. Jewell. 1993. “A geometric approach to assess bias due to omitted covariates in generalized linear models.” *Biometrika* 80 (4): 807–815.