Big Data and health economics: What’s the added value?

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Big data: issues

• Large numbers, but..
• Key is ‘granularity’ many variables per unit ..often from many, linked sources
• Raises new opportunities and challenges for design (ignored) analysis (specific focus)
• Health economics can
  – Gain value from big data
  – add value to big data methods
1. Policy-relevant design

- Evaluations new health policies
- Clinical interventions
  - Sekhon and Grieve, 2015, Pennington et al 2015
- Evaluations for target populations
  - Hartmann, Grieve et al 2015, Steventon et al 2015
2. Methods from other disciplines

- Multivariate matching methods (Diamond and Sekhon 2015)
- Matching combined with Instrumental variable methods (Baiocchi et al 2010)
- Reweighting approaches that test for unobservables (Hotz et al, 2005)
Bring back altruism. Our blood banks depend on it

Polly Toynbee

Donations are falling, but a US-style model of paying donors would be disastrous. From giving blood to paying tax, it’s altruism that creates a decent civilisation.
3. Different evidence e.g. preferences

• Health Economic Modelling of alternative blood donation strategies (HEMO)

• Goal: value of alternative strategies in practice.

• Future: harness big data to provide assessment of cost-effectiveness of strategies towards personalisation.
References


