

Discussion of “Estimating the Impact of  
Medical Innovation: A Case Study of HIV  
ARV Treatments,” Duggan and Evans

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# Main Conclusion

- In a well specified econometric model, one can potentially use large observational data to estimate health and cost effects of medical treatment
- Advantages
  - Sample size and longitudinal nature (mortality and rare side effects)
  - RCT usually versus placebo and exclude co-morbidities
  - Understand how availability of treatment affects health in a real-world setting
- Alternative to post-approval studies loosely mandated by FDA and proposed in new IOM report?

# Questions

- Side effects with ARVs is a major issue
  - Upward bias in estimates?
  - Or does similarity with RCT data suggest attrition in trials  $\sim$  attrition in real-world setting

# Questions

- Health effects of drugs
  - D&E nicely document mortality effects
  - ARVs also slow transition from HIV to AIDS
  - Look at changes in the number and/or types of claims by HIV-only patients (proxy by lowest quartile of claims) pre- and post-introduction of PI?

# Questions

- Implications of findings for technological change
  - ARVs are expensive, yet seem quite cost-effective
  - Consistent with market power and a low elasticity of demand