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A second look at pharmaceutical spending as determinants of health outcomes in Canada

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The Issue: The costs and benefit of drug spending

Per capita spending on pharmaceutical products has increased substantially in recent decades in Canada.

- Drug spending constitutes a growing share of health care expenditures, rising from 8.4% to an estimated 17.4% between 1978 and 2008.
- Total expenditure on drugs now exceeds the amount spent on physicians' services.
 - The health gain achieved through such spending is debated: while some new drugs unquestionably improve health, high-priced me-too drugs that offer little advantage over existing, lower-cost drugs imply that much of the higher expenditure may buy little health improvement.

Research objective

Crémieux et al. (2005) measure the statistical relationship between drug spending in Canadian provinces and overall health outcomes.

- They conclude that there is a “strong statistical relationship between pharmaceutical spending and health outcomes, especially for infant mortality and life expectancy at 65”.

Research objective: To take a second look at pharmaceutical spending as determinants of health outcomes in Canada:

- Data
- Methods
- Context

Results and Key Messages

- **We fail to find any systematic relationship between drug spending and health outcomes.**
 - We identify the (difficult-to-justify) feature of the original analysis that seems most responsible for the spurious finding.
- **The study illustrates the need for replication in scientific research.**

Data and methods matter

- **Policymakers should challenge interest groups to submit evidence based on systematic reviews and not on single studies.**

Advice to the Minister*

Given our findings, the comprehensive evidence linking funding sources with research outcome and the ever increasing share of drug spending in health care expenditures:

1. Increase investments in Health Research
 - Announce today that you will double CIHR's annual budget;
2. Specifically instruct your top scientists to ensure that research funds are available for replication in all types of scientific research

** We are assuming for the sake of discussion that our findings and policy implications are supported by up-to-date systematic reviews*

Acknowledgements and Contacts

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