**Drug Diffusion through Peer Networks: The Influence of Industry Payments**

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**Abstract:**

Medical drug and device companies invest over USD 8 billion annually in payments to physicians and hospitals; many of these payments are targeted at encouraging use of new drugs.

Drug detailing efforts of pharmaceutical companies leverage peer influence within existing provider networks to broaden their reach beyond the directly targeted physicians.

Using matched physician data from Medicare Part D and Open Payments, we investigate the influence of pharmaceutical payments on the prescription of new anticoagulant drugs.

First, we show that pharmaceutical payments target physicians who share patients with many different providers and thus may influence a broader network of peers.

Within a difference in differences framework, we find a physician's own prescription of new anticoagulant drugs increases following a pharmaceutical payment, relative to the physician-specific baseline prescribing rate for that drug.

The effect scales with the size of the payment, with large payments such as speaking and consulting fees spurring larger increases in prescribing than small payments for food.

Peers of targeted physicians also increase their prescribing of the new drug after the targeted physician receives a large payment, in some cases introducing entirely new patients to the drug class.

Payments induce an increase in prescriptions even for patients with high risk for side-effects and low expected benefits.

Results suggest that spillover effects on peers are an important channel through which payments influence prescriptions, and that such influence may spur low-value prescriptions.