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POLICY BRIEF
JULY 2026

Pharmaceutical industry interactions and analgesic prescribing

Evidence relevant to chronic nonmalignant pain and implications for prescribing governance

Policy brief by Mohammed Gharbia | M.D. & SPHeRE PhD Scholar | Department of General Practice, RCSI

DECISION MESSAGE

Across nine U.S. observational studies, pharmaceutical industry promotional payments were consistently associated with higher analgesic prescribing and higher opioid-related prescribing expenditure. One study of institutional marketing restrictions reported lower opioid prescribing.[1] **The review supports considering enforceable safeguards that reduce routine promotional contact, independent, promotion-free continuing education, and routine monitoring of prescribing and prescribing expenditure, with prospective or quasi-experimental evaluation.** The evidence is observational: it does not confirm causality, provide an Irish effect estimate, or show whether the prescribing changes produced net patient benefit or harm.

WHY THIS MATTERS

PRESCRIBING WITH CONSEQUENCES

Chronic nonmalignant pain can involve long-term analgesic prescribing, clinical uncertainty, safety considerations and substantial prescribing expenditure.

MULTIPLE FORMS OF INTERACTION

Included studies examined non-research payments, meals or gifts, speaker or consulting fees, educational sponsorship, and institutional marketing restrictions.[1]

A BROADER PRESCRIBING ISSUE

These findings align with other systematic reviews linking pharmaceutical industry payments and interactions with prescribing across therapeutic areas; the issue is not limited to pain or analgesics.[2,3]

EVIDENCE IN ONE VIEW

Consistent direction, but magnitude and causality remain uncertain

10	9 + 1	8	MODERATE
observational studies all from the U.S.	opioid + gabapentinoid studies	studies reporting dose-response patterns	certainty for prescribing volume and expenditure LOW for dosage intensity

PROMOTIONAL PAYMENTS	38 / 38	outcome observations were directed towards higher prescribing volume, dosage intensity and/or prescribing expenditure
MARKETING RESTRICTIONS	6 / 6	outcome observations were directed towards reduced prescribing; all came from one institutional policy study

INDUSTRY PAYMENTS & VOLUME

7 of 7

payment studies reported higher volume

1 restriction study reported lower volume

MODERATE CERTAINTY

PRESCRIBING EXPENDITURE

3 of 3

studies reported higher opioid-related prescribing expenditure

Two-study pooled estimate: +US$4,785 per physician-year (95% CI US$2,162 to US$7,408; I^2 = 93.5%)

MODERATE CERTAINTY

DOSAGE INTENSITY

1 study

reported 27% higher odds of high-dose prescribing at ≥90 MME/day

one study only

LOW CERTAINTY

Also reported: three studies found higher brand-name/patented prescribing among payment recipients; certainty was not graded for this outcome. MME = morphine milligram equivalents.

HOW TO READ THE EVIDENCE

WHAT STRENGTHENS CONFIDENCE

- **Objective measurement:** industry payments/policies and prescribing outcomes were measured using administrative datasets; exposure and outcome measurement were low risk of bias in all 10 studies.
- **Dose-response patterns:** eight studies reported larger prescribing differences with greater payment exposure or more comprehensive restrictions.
- **Temporality and stronger methods:** several studies used longitudinal or quasi-experimental approaches designed to reduce confounding.

WHAT LIMITS INFERENCE

- **Observational evidence:** nine studies had moderate and one had low overall risk of bias; residual confounding remains plausible.
- **Indirectness:** all studies were U.S.-based, and most did not explicitly restrict analyses to chronic nonmalignant pain populations.
- **No patient-level clinical outcomes:** overdose, emergency admissions, mortality, functional status, pain and quality of life were not assessed.
- **Scope and overlap:** nine studies concerned opioids, one concerned gabapentinoids, and several used overlapping Medicare/Open Payments prescriber populations.

Review rigour: prospectively registered protocol; five databases searched from inception to February 2025 with no language restrictions; duplicate screening, extraction and risk-of-bias assessment; GRADE certainty appraisal; meta-analysis only when estimates were sufficiently comparable.

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FROM EVIDENCE TO POLICY: THREE PRIORITY ACTIONS

EVIDENCE BOUNDARY Only one included study directly evaluated institutional marketing restrictions. Independent promotion-free education and routine monitoring of prescribing and prescribing expenditure are policy implications of the published review, not intervention effects established by the included studies. Any Irish implementation should include prospective or quasi-experimental evaluation.

1 REDUCE ROUTINE PROMOTIONAL EXPOSURE

Enforce existing conflict-of-interest policies, including Medical Council guidance on gifts, hospitality and low-value promotional materials.[4] Consider enforceable limits on routine sales-representative access and promotional speaking or consulting arrangements in high-exposure or high-risk contexts.

LEAD	DIRECT EVIDENCE	MONITOR
Health-service organisations; professional and regulatory bodies; health-system decision-makers.	Direct but limited: the only institutional restriction-policy study reported reduced opioid prescribing, with the largest reduction when all four restriction categories were in place; individual restrictions were less consistent.	Policy coverage and enforcement; interaction exposure; prescribing volume, dosage intensity and prescribing expenditure.

2 STRENGTHEN INDEPENDENT, PROMOTION-FREE EDUCATION

Ensure prescribers have access to independently funded continuing professional development and therapeutic guidance that is not shaped by promotional messaging. Where commercial funding is used, manage it through unrestricted education funds without commercial influence.[4]

LEAD	REVIEW IMPLICATION	MONITOR
Professional and educational bodies; clinical programmes; employers and clinical leaders.	Policy implication from the published review and the literature it cites. None of the included studies directly tested independent education as an intervention.	Funding source and independence of education; reach; use of independent therapeutic guidance.

3 LINK EXPOSURE, PRESCRIBING AND CLINICAL OUTCOMES

Link transparency or interaction-exposure data with prescribing claims and longitudinal clinical outcomes. Evaluate policy changes using prospective or quasi-experimental designs, such as interrupted time series or policy natural experiments.

LEAD	EVIDENCE GAP	MONITOR
Health-system clinical-governance and data services; medicines-management teams; research partners.	Evidence-gap response: all included evidence was U.S.-based, most studies did not explicitly identify chronic nonmalignant pain populations, and none reported patient-level clinical outcomes or an Irish effect estimate.	Interaction exposure; prescribing volume, dosage intensity, brand/generic patterns and prescribing expenditure; patient-centred and safety outcomes.

LOCAL EVALUATION: MEASURE THE FULL CHAIN

1. EXPOSURE & POLICY
Interaction type, value and frequency
Policy reach, implementation and enforcement

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2. PRESCRIBING OUTCOMES
Volume and days supplied
Dosage intensity / high-dose thresholds
Brand-generic patterns and prescribing expenditure

>

3. CLINICAL OUTCOMES
Overdose, emergency admissions and mortality
Functional status, pain and quality of life

Population and medicine scope: use explicitly identified chronic nonmalignant pain populations and include non-opioid analgesics. Use longitudinal record linkage and a prospective or quasi-experimental design.

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