

Financial Conflict of Interest in Published Systematic Reviews on Interventions for 6 Common Clinical Diagnoses, 2010 and 2019.

Marek Czajkowski MD ^{1,2}, Alexandra Snellman PhD ^{1,2}, Louise Olsson MD, PhD ^{1,2}
¹ School of Medical Sciences, Örebro University, Sweden, ² Centre for Assessment of Medical Technology in Örebro, Sweden

Conclusion

The proportion of systematic reviews (SRs) with authors disclosing financial conflict of interest (fCOI) or reporting funding from industry was lower in 2019 compared to 2010, but full information was still missing in every fifth SR. Only a minority of SRs reported data on fCOI or funding disclosed in the included primary studies. Risk factors for these shortcomings need to be identified.

Objective

Conflict of interest in SRs has gained some recognition lately ^{1,2} but overall knowledge is very limited, in particular from a clinical perspective. The aim of this study was to investigate fCOI in SRs relevant to primary care.

Design

PubMed was searched by a librarian in June 2021 for SRs published in 2010 and 2019 evaluating interventions for six common diagnoses that in all cover a large proportion of patients in primary care. Two independent researchers selected relevant SRs according to PRISMA guidelines.

Data on fCOI and funding were extracted from full-text versions of SRs. SRs of authors disclosing fCOI **or** reporting funding from industry were categorized as "Yes". SRs of authors declaring no fCOI **and** reporting no funding from industry were categorized as "No". Remaining SRs with missing information either on authors' disclosure of fCOI **or** information on funding were categorized as "Missing".

A random sample of 50 SRs per fCOI category (Yes, No, Missing) was drawn, and data on fCOI and funding of the primary studies reported in these 150 SRs were extracted.

References

- Hakoum MB, et al. Reporting of financial and non-financial conflicts of interest by authors of systematic reviews: a methodological survey. *BMJ Open* 2016;6:e011997.
- Hansen C, et al. Financial conflicts of interest in systematic reviews: associations with results, conclusions, and methodological quality. *Cochrane Database of Systematic Reviews* 2019, Issue 8. Art. No.: MR000047.

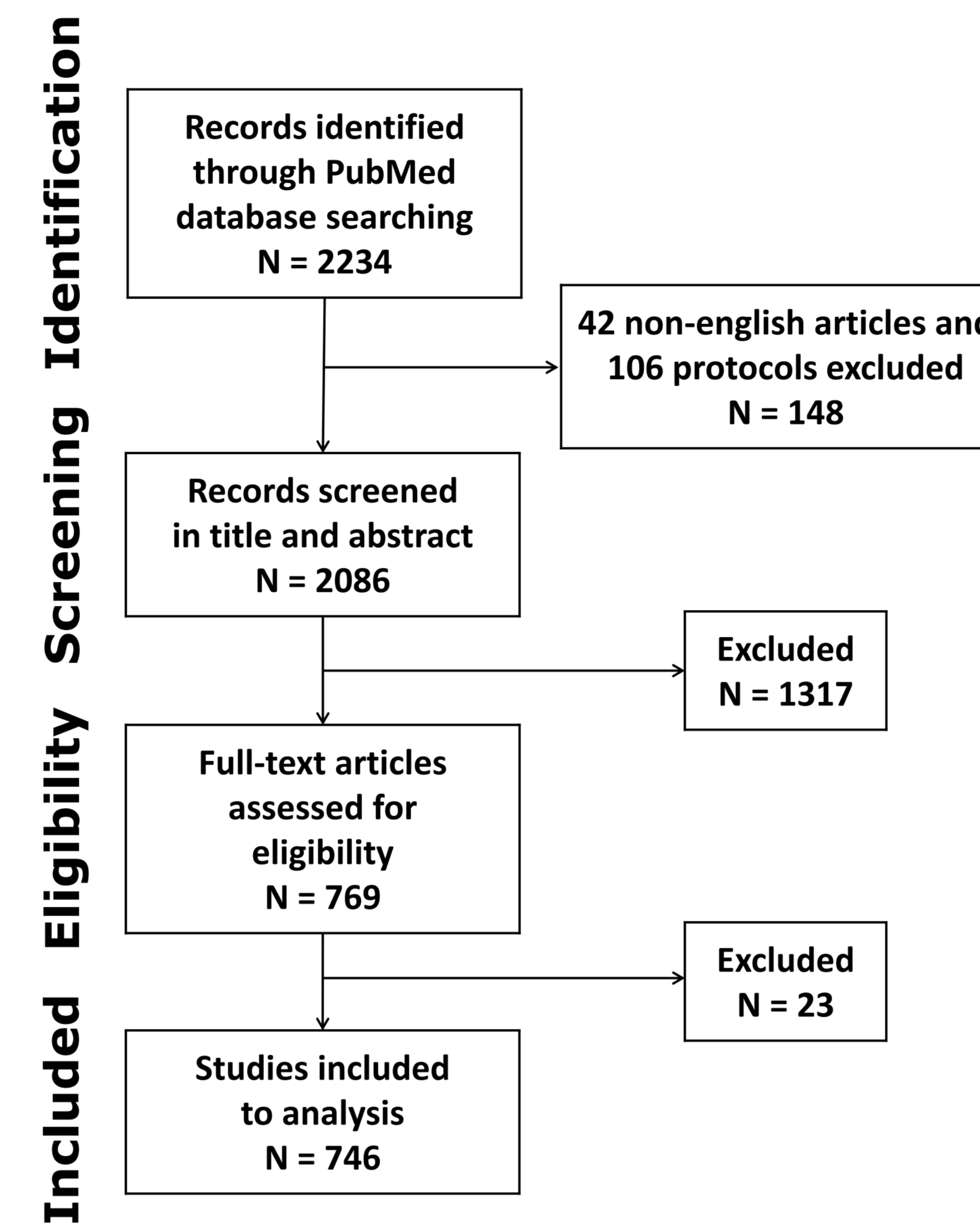


Figure. Study flow chart.

Results

Out of 2234 initial hits, 746 (33%) SRs were included (Figure). The number of included SRs increased fourfold from 156 in 2010 to 590 in 2019 (Table). Type 2 diabetes (186/746; 25%) and pharmacological interventions (247/746; 33%) were the most common topics. First author was affiliated with an institution in China for (130/746) 17% SRs.

Overall, fCOI or funding from industry was disclosed (category Yes) in 147 (20%) of SRs; 38 (24%) in 2010 vs 109 (19%) in 2019 (Table). An opposite trend was noticed for osteoarthritis alone with 3 (13%) SRs in 2010 vs 28 (23%) in 2019. The largest proportion of SRs in the "Yes" category was found for depression with 12 (34%) SRs in 2010 and 27 (32%) in 2019.

In all, SRs with missing information on fCOI or funding (category Missing) were more common in 2010 than in 2019 (37% vs 20%). The only exception was for hypertension with 7 (24%) SRs in 2010 vs 28 (36%) in 2019.

Out of a random sample of 150 SRs, 30 (20%) reported data on fCOI or funding for the included primary studies.

Table. Financial conflict of interest of SRs for six common diagnoses in 2010 and 2019. Values in parentheses are column percentages.

fCOI category	Chronic Obstructive Pulmonary Disease		Diabetes Mellitus Type 2		Hypertension		Dementia		Major Depressive Disorder		Osteoarthritis		All diagnoses	
	2010	2019	2010	2019	2010	2019	2010	2019	2010	2019	2010	2019	2010	2019
Yes	8 (29)	13 (21)	5 (20)	28 (17)	5 (17)	5 (6)	5 (31)	8 (10)	12 (34)	27 (32)	3 (13)	28 (23)	38 (24)	109 (19)
No	12 (42)	40 (66)	6 (24)	107 (66)	17 (59)	44 (57)	3 (19)	60 (72)	15 (43)	43 (51)	8 (35)	68 (55)	61 (39)	362 (61)
Missing	8 (29)	8 (13)	14 (56)	26 (17)	7 (24)	28 (36)	8 (50)	15 (18)	8 (23)	14 (17)	12 (52)	28 (23)	57 (37)	119 (20)
Total	28	61	25	161	29	77	16	83	35	84	23	124	156	590

Conflict of interest: Nothing to declare.

Funding: Center for Clinical Research Dalarna, Falun, Sweden.

Contact: marek.czajkowski@oru.se