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Conflict of interest as ethical shorthand: Understanding the range and nature of “non-financial conflict of interest” in biomedicine

Quinn Grundy, PhD RN^{1,2*}

Christopher Mayes, PhD³

Kelly Holloway, PhD⁴

Sasha Mazzarello, MSc¹

Brett D. Thombs, PhD⁵⁻¹¹

Lisa Bero, PhD²

*Corresponding author:

Quinn Grundy

Email: quinn.grundy@utoronto.ca

Address: Suite 130, 155 College St, Toronto, ON, M5T1P8, Canada

Telephone: +1-416-978-2852

¹University of Toronto, Faculty of Nursing

²The University of Sydney, School of Pharmacy, Charles Perkins Centre

³Deakin University, Alfred Deakin Institute

⁴University of Toronto, Institute of Health Policy Evaluation and Management

⁵Lady Davis Institute of the Jewish General Hospital, Montreal, Quebec, Canada

⁶Department of Psychiatry, McGill University, Montreal, Quebec, Canada

⁷Department of Epidemiology, Biostatistics, and Occupational Health, McGill University, Montreal, Quebec, Canada

⁸Department of Medicine, McGill University, Montreal, Quebec, Canada

⁹Biomedical Ethics Unit, McGill University, Montreal, Quebec, Canada

¹⁰Department of Psychology, McGill University, Montreal, Quebec, Canada

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¹¹Department of Educational and Counselling Psychology, McGill University, Montreal, Quebec, Canada.

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Abstract

Objective: To identify the range of issues labelled as “non-financial conflicts of interest” in biomedicine, articulate the associated concerns, and analyse the implications of defining these issues as conflicts of interest.

Study design and setting: A qualitative study triangulating data from three purposively sampled sources: 1) literature, 2) policies; and 3) interviews. Participants were corresponding authors of sampled literature (December 2017 - January 2019). A critical, interpretive approach served as the analytic strategy.

Results: 99 articles provided the sampling frame; we recruited 16 participants and sampled 20 policies. Participants labelled a wide range of personal attributes, social relationships, professional experiences, intellectual endeavours, and financial interests as “non-financial conflicts of interest.” Despite a lack of consensus regarding the nature of the problem, many “non-financial” interests are currently subject to policy action. The term serves as ethical shorthand to describe the ways that 1) “strong beliefs”; 2) “pre-determined views”; 3) experiences; and 4) relationships shape evidence-led processes.

Conclusion: Expansion of the definition of conflict of interest to include non-financial interests may have unintended consequences including exclusion of diverse perspectives. Problems labelled “non-financial conflicts of interest” should be defined in terms of what they are rather

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than what they are not (i.e. “non”-financial). We suggest instead, preventing financial conflicts of interest and ensuring inclusive and equitable representation within evidence-based processes.

Keywords: conflict of interest, non-financial interests, disclosure, qualitative methods, clinical guidelines, systematic reviews

Running title: Conflict of interest as ethical shorthand

What is new?

- Biomedical organisations are rapidly adopting policy pertaining to “non-financial conflicts of interest,” which includes disclosure and recusal
- The term “non-financial” interest is used to refer to a wide range of personal attributes, professional experiences, social relationships, and financial interests
- Labelling “non-financial” interests as conflicts of interest obscures underlying problems related to lack of diversity, representation, and power dynamics within evidence-led processes
- We require new conceptual tools to address “non-financial” interests and renewed focus on managing conflicts of interest

Policies to identify, disclose, and manage conflicts of interest are nearly ubiquitous in biomedicine. A recurring critique of conflict of interest policy is that the focus on financial conflicts of interest overlooks influential “non-financial” interests.¹⁻⁴ However, “non-financial” conflicts of interest are controversial, poorly defined, and little studied,⁵⁻⁷ and depart from the legal origins of the concept.⁸ Despite a lack of consensus on what constitutes a “non-financial” interest, scientific organizations, including journals, guideline developers, and professional associations, are adopting policies that require biomedical researchers to formally and publicly disclose their “non-financial” conflicts of interest.⁹⁻¹¹ For example, over half of core clinical journals have a policy that requires authors to disclose some form of “non-financial” interest, but the interests covered vary considerably.¹² These interests include authorship of studies on the same subject, membership of a particular school of thought, political affiliations and “anything that affects objectivity.”¹²

Labelling diverse experiences, beliefs, and relationships as “non-financial conflicts of interest” may have dangerous unintended consequences for the biomedical community. For example, a recent high-profile commentary suggested that nutrition researchers disclose relevant dietary preferences and practices related to “extreme and committed behavioral stances” and “cultural or religious value judgments.”¹³ However, all researchers have dietary preferences and

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practices that are at least in part, a product of cultural and other value judgments. Thus, requiring declaration of dietary “interests” creates the risk that certain diets (in this case, non-Western or non-secular) are labeled as a source of bias, while others remain relatively unexamined.¹⁴

There is urgent need for clarification around the nature of the problems associated with “non-financial conflicts of interest” and to question whether “conflict of interest” best describes these concerns. Our aim was to articulate the range of issues that are currently labeled as “non-financial conflicts of interest” by biomedical researchers and policymakers and to catalogue “non-financial” interests currently addressed in policy. We analysed actual experiences with what participants termed “non-financial conflicts of interest” to understand their relevance and to analyse the implications which flow from defining these concerns as conflicts of interest. We articulate several concerns underlying participants’ experiences with “non-financial conflicts of interest” to suggest new ways of addressing these concerns.

Methods

We conducted a critical qualitative investigation to identify the range and nature of issues termed “non-financial conflicts of interest.” To enhance rigor, we triangulated three data sources: 1) published scholarly literature; 2) conflict of interest policies; and 3) interviews. The methods are reported in accordance with the COREQ guidelines.¹⁵ The Human Research Ethics Committee at The University of Sydney approved the study (#2017/585).

Research framework

We employed a critical, interpretive approach which emphasises that the way problems are defined (e.g. as “conflicts of interest”) has implications for how the underlying issues are thought about, who is affected and how, and the kinds of solutions proposed.¹⁶ We also aimed to articulate the underlying concerns, grounded in the experiences of those directly involved.

Reflexivity. The researchers comprise a multi-disciplinary team including clinical, epidemiological, policy, social science and philosophical perspectives. QG and LB provide expert advice on conflict of interest policy, and BT and LB are involved in guidelines development, which provided impetus for the research and the critical approach as we have encountered pragmatic and ethical issues with “non-financial” conflict of interest in our work. We view scientific research as a social process; while it is essential to systematically examine all of the social identities and values shaping a research process, these cannot possibly be eliminated, but must be made visible and open to critical interpretation.

Sampling frame

On September 15, 2017, we conducted a purposeful, transparent, and broad search to identify scholarly articles that defined conflicts of interest in a way that included “non-financial” interests with no exclusions by date, language, or article type; we updated the search on March 20, 2019. We searched PubMed, Scopus, and Google Scholar using the following search strategy, filtering search results by “relevance”: (“non-financial” or “intellectual” or “personal”) and (“conflict of interest” or “competing interest” or “declaration of interest” or “disclosure”). Two investigators independently screened titles and abstracts for content related to “non-financial” interests (Figure 1).

Figure 1. Study design and sampling frame

Sampling and data collection

Interviews. With the aim of identifying maximum variation in perspectives, we emailed interview invitations to corresponding authors of sampled articles that were: 1) empirical studies of non-financial conflicts of interest, 2) high-profile commentaries or 3) accounts of managing a non-financial conflict of interest. QG conducted all interviews between December 2017 and

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January 2019, face-to-face, by telephone or over video-conference, at the request of the participant; interviews lasted between 25 and 60 minutes. Participants consented, then QG asked participants to share direct experiences about professional situations where a “non-financial” interest was relevant (see interview guide in Table S1). Field notes, including a summary of sampled articles written by or citing the participant, were written before and after the interview. Interviews were audio-taped, transcribed by a medical transcriptionist, then de-identified, and imported into NVivo software (QSR 12).

Policies. We purposively sampled conflict of interest policies identified in sampled articles or referenced by interview participants. Two investigators independently screened candidate policies according to the following inclusion criteria: 1) pertained to conflicts of interest; 2) authored by a national, international, or widely cited biomedical organisation; and 3) explicitly addressed non-financial interests. The list of included policies was circulated among team members for validation. We catalogued all policies using Excel, and two investigators independently extracted each policy’s definition of “conflict of interest” verbatim.

Data analysis

QG summarised each interview to identify lines of inquiry, developed from the research framework, aims, sampled articles, and emerging themes.¹⁷ Analysis was guided by the questions: How is the problem of “non-financial” interests thought about? What are the underlying assumptions? and With what effects?¹⁶ From these summaries, we developed a coding scheme consisting of ten broad labels such as “defining conflict of interest.” QG then wrote detailed memos on each of the labels, integrating interview text, content from sampled articles, and policies. This resulted in further sub-codes such as “material,” “socio-political,” and “relational,” which formed the basis for cataloguing non-financial interests and identifying

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associated concerns. Two investigators then independently and iteratively catalogued all “non-financial” interests identified in policies and sampled articles, until no new categories of interests were identified. Memos were reviewed and discussed in team meetings to refine interpretation.

Results

The majority of participants were male (10/16, 63%) and physicians (10/16, 63%); participants were based in North America (6/16; 38%), Europe (5/16, 31%), and Asia-Pacific (5/16, 31%) and included systematic reviewers, guideline developers, editors, industry scientists, and committee chairs. In interview #11, the participant shared highly similar narratives to previous participants; we recruited an additional 5 participants to solicit conflicting and diverse viewpoints and by interview #16 determined that data were saturated within this sampling frame.

In interviews, published literature (n=99) and policies (n=20), participants labeled a wide range of personal attributes, social relationships, professional experiences, intellectual endeavours, and material interests explicitly as “non-financial conflicts of interest,” which are catalogued in Table S2. Catalogued interests included those implemented in current policy, reported by individuals in leadership roles, proposed in a scholarly or policy forum, or directly experienced as what participants termed ‘non-financial conflicts of interest.’

We found little consensus as to what should be included under the term “non-financial conflict of interest” and that our categorisations poorly reflected the nature of these ‘interests.’ However, many are currently subject to policy action. Some interests that participants termed “non-financial” were actually financial in nature, such as revenue from a proprietary intervention, employment, or other opportunities for likely, tangible gain for the individual or a third-party.

Our analysis of 20 policies found that a widely cited and operationalized definition of conflict of interest is the one adopted by the Institute of Medicine, which references the “undue influence” of a secondary interest on the judgements or actions related to a primary interest.³¹ Some policy organisations have expanded the definition of “secondary interest” to include anything that might influence decision-making. Table S3 details the range of ways that organisations currently define “non-financial conflicts of interest” and catalogues the specific interests that are covered under these policies.

Analysis of interviews, policies and articles identified 4 concerns underlying what participants termed “non-financial conflicts of interest” including the influence of: 1) “strong beliefs”; 2) “pre-determined views”; 3) experience; and 4) relationships.

“Strong beliefs”

In a 1992 issue of *Science*, a journalist asked, “When does intellectual passion become conflict of interest?”³⁴ A concern running through the ongoing debate about “non-financial conflicts of interest” relates to whether an individual can remain receptive to evidence, perspectives, or positions that contradict their so-called “strong beliefs.” The United States Preventive Services Task Force, for example, requires that members disclose “strongly held beliefs related to a topic area that would make it difficult for a Task Force member to work on a related topic.”³² One member publicly disclosed “strongly held beliefs related to prostate cancer,” in addition to publications and grants on the topic, and was recused from any workgroup, deliberation or voting related to prostate cancer; however, the nature of the “strongly held beliefs” was not disclosed. Several organisations have used “substantial career efforts” (including authorship of studies included in a systematic review or previous reviews or

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guidelines, leadership roles, or public comment) as a proxy for identifying individuals at risk of developing “attachment to a specific point of view.”^{9-11,32}

Points of view were particularly defined as “non-financial conflicts of interest” when published, publicly expressed or associated with advocacy positions, which were often characterised as “pre-determined.” One participant recalled a committee meeting where two participants declared making “strong public statements about the health risks of second-hand smoke” as non-financial conflicts of interest meaning, “Part of their identity was wrapped up in a public statement that they had made about cigarettes . . . We’re all different personally, but all of us tend to cling to what we’ve said.” Having a “stake in the ground,” explained the participant, meant that “egos” were caught up in a particular position making it difficult to change one’s mind even “if faced with facts.”

However, policies and participants did not always differentiate between “strong beliefs” that were evidence-based and those that were not. Participants shared several instances where they or their colleagues had been recused from committees on the basis of “intellectual conflict of interest” after expressing views that were critical of powerful interests such as industry, professional associations, or institutions, despite having declared these published positions. One participant recounted,

We all have scientific views. And I don’t know why it’s a conflict if I present data in support of what I’m saying. . . If I had no data in support of what I’m saying, I can understand if someone said, ‘Don’t let [me] serve, because he’s against drugs.’ But I had facts. Facts had been published at a public meeting with a large number of people.

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Some participants perceived that assessments of “intellectual conflict of interest” were made inconsistently and irrespective of the quality or strength of evidence on which the “strong beliefs” were based.

Faith and fixed beliefs

Participants argued that personal interests including religious beliefs, cultural practices, dietary habits, and other personal values have a “profound effect”³³ on judgment and are primary drivers of behavior.² The underlying concern related to whether having ‘beliefs’ would interfere with one’s ability to participate in an evidence-led, deliberative decision-making process. For example, commentators questioned, “Could an author who is strongly adherent to some religion conclude that a diet-related prescription of his or her religion is so unhealthy as not to be worthwhile?”¹³

Particularly, participants described political or religious beliefs as highly influential, and thus, a source of “conflict of interest”; they characterised these beliefs as intractable, associated with “faith” as opposed to reason, and disruptive or corruptive of evidence-led decision-making. The boundaries of this category were occasionally pushed to include anything strongly experienced, whether persistent or fleeting: in an 2001 editorial outlining the *BMJ*’s decision not to publish animal research, editor Richard Smith disclosed his grief over the death of his pet rabbit.¹⁸

However, discussion of what were termed “personal interests” remained largely hypothetical. One participant argued,

If I belong to a religious organization, I might well have a particular interest that determines or decides a decision I might take in relation to a particular issue such as abortion, obviously.

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Although characterized as being at odds with evidence-based processes, the “personal conflicts of interest” invoked referred exclusively to questions of values and preferences that cannot be determined by evidence alone, such as abortion or “antagonism to capitalism.”²⁰ The discussion around personal interests also singled out beliefs that were not judged to be the ‘norm’ – for example, no one called on researchers who strongly adhere to Western medicine to disclose these personal practices.

Diversity of experience

Another concern related to the realisation that who was at the table, so to speak, determined the outcome of the process. Participants recognized that experts’ interpretation of the evidence was shaped by their specialty training, experience with various patient populations, and values, resulting in a judgment arising from a particular perspective. In an empirical study associating professional specialty with guideline recommendations, the authors emphasized, “the composition of the panel formulating guidelines appears to be critical; it may be possible to choose a panel a priori that makes a specific recommendation more likely.”²⁵ Termed “professional conflicts of interest,” participants struggled with how to ensure transparency, consistency, and reproducibility in light of experts’ diverse, and partial, experiences.

Termed sometimes as an “indirect” conflict of interest interest,¹⁰ the confounding influences posed by clinical revenue or relevant industry relationships were acknowledged when discussing the fact that radiologists tend to support screening or surgeons, surgical intervention, for example.^{10,25} However, participants often placed greater emphasis on the meaning of professional identity as a ‘reason for being’ and the particular perspective that arose from this identity as a source of bias: a participant’s “whole persona,” a guidelines expert explained, “depends on things that they’re going to try to push, independent of the objectivity of the data.”

Some participants characterized this as a problem of silos within a field and others as a lack of diversity within systematic review teams, guideline panels, or scientific committees. For example, one participant dissected the controversy surrounding the recent release of a hypertension guideline, suggesting that if primary care clinicians had been involved, the recommendations “would be completely different.” The guideline did not advocate repeat blood pressure measurements “because the [specialists] don’t care,” the participant explained,

They have a bias, a non-financial conflict. It may be financial too. They don’t care that the major trial was one in which all the patients had some kind of cardiac disease . . .

That’s a bias, that’s a conflict of interest, non-financial.

The participant contrasted the specialists’ interpretation of the evidence with that of public health professionals, “who have their own biases, public health biases.” However, this recognition resulted in the fact that everyone at the table had a “non-financial conflict of interest.”

Personal relationships

Fairness and the ability to participate equally within scientific processes were additional concerns underlying many issues termed “non-financial conflicts of interest.” Particularly in the context of peer review, participants suggested “non-financial conflicts of interest” as an explanation for outcomes they believed were unfair. Participants working in “competitive” fields experienced these types of conflicts most acutely. “I’ve had people say things like, ‘this person’s conflict of interest is that we don’t get on,’” said one participant, an editor.

Well, how on earth are we going to manage that? Does that mean you just can't stand each other, or does it mean that there's some mild antipathy or is that really a conflict of interest?' . . . That's a very odd conflict, but it's obviously quite an important one.

Participants rarely had any evidence that a reviewer had a non-financial conflict of interest, but "their suspicion that non-financial COIs had affected the review process originated occasionally in personal convictions, interpretations, and hearsay."²⁸

Participants described social relationships as another source of influence and sometimes distortion of evidence-based decision-making and thus, "non-financial conflicts of interest." Social relationships could create power dynamics within committee processes that interfered with equal participation and efforts to achieve transparency in decision making. For example, one participant discussed the phenomenon of expert 'in-groups,' a "non-financial conflict" which he termed "gangs," where frequent collaborators would vote as a bloc, ensuring that committee outcomes aligned with their "preconceived" agenda.

Discussion

"Non-financial conflicts of interest" are variably defined and the term is used to refer to the broadest range of personal, professional, and social attributes. While these attributes and relationships are undoubtedly influential within biomedicine, there may be unintended consequences to defining these as "conflicts of interest." Recent investigations into non-disclosure have highlighted the challenges, particularly for editors, of ensuring compliance with conflict of interest policies.^{34,35} Expanding the definition of conflict of interest to include anything that might influence judgment will heighten such challenges and risks making conflicts of interest appear so pervasive they can only be disclosed and not prevented.⁶

Calls to expand the category of disclosure-worthy information to personal attributes, beliefs or practices may also serve exclusionary purposes. Labelling certain diets, beliefs, or practices as “non-financial conflicts of interest” positions some researchers as biased, while other researchers (typically white, secular and male) claim objectivity, cementing positions of privilege and power within the scientific enterprise.¹⁴ Meanwhile, there is a rich scholarly tradition evaluating the extent to which scientists cannot help but come to research with prior perspectives, experiences and *interests*; these scholars have proposed ways to promote greater inclusion and accountability for one’s perspective.³⁶⁻⁴⁰ We thus advocate for development of strategies to bolster rigorous representation of diverse perspectives within biomedicine.

Our analysis suggests policymakers should define the concerns characterized as “non-financial” interests in terms of what they are rather than what they are not (i.e. “non”-financial). We identified several concerns that suggest that “non-financial conflict of interest” serves as ethical shorthand for a range of problems including lack of diversity or power dynamics, which in turn, suggests the need for different solutions. However, “non-financial” was also used to describe a variety of situations in which an individual or third-party had a material interest or competing obligation, for example, the designation “unpaid consultant”⁴¹; that is, they derived, or were reasonably promised, revenue, income, intellectual property, company equity, reimbursement, or other tangible benefit by virtue of their position. Interests which are often commonly considered financial, such as employment or acceptance of food or gifts, were also reported as “non-financial.” These situations should legitimately be called “conflicts of interest” as the interests represent a competing obligation and risk compromising an individual’s primary accountability. Policymakers should thus focus attention on preventing such conflicts of interest.

Conclusion

There are myriad social, political, cultural, and personal influences that shape scientific judgment. To foster transparency, accountability and trust in the scientific process, the scientific community urgently needs tools to better grapple with the social contexts in which scientists work. We live in a political climate where scientific expertise is frequently undermined and facts and reliable data disregarded in policy arenas, overcrowded by opinions.⁴² We require policy tools to foster public trust in expertise, not to undermine it. This will involve managing conflicts of interest and separately ensuring that biomedical processes equitably represent and are accountable to the communities they serve.

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Figure 1.

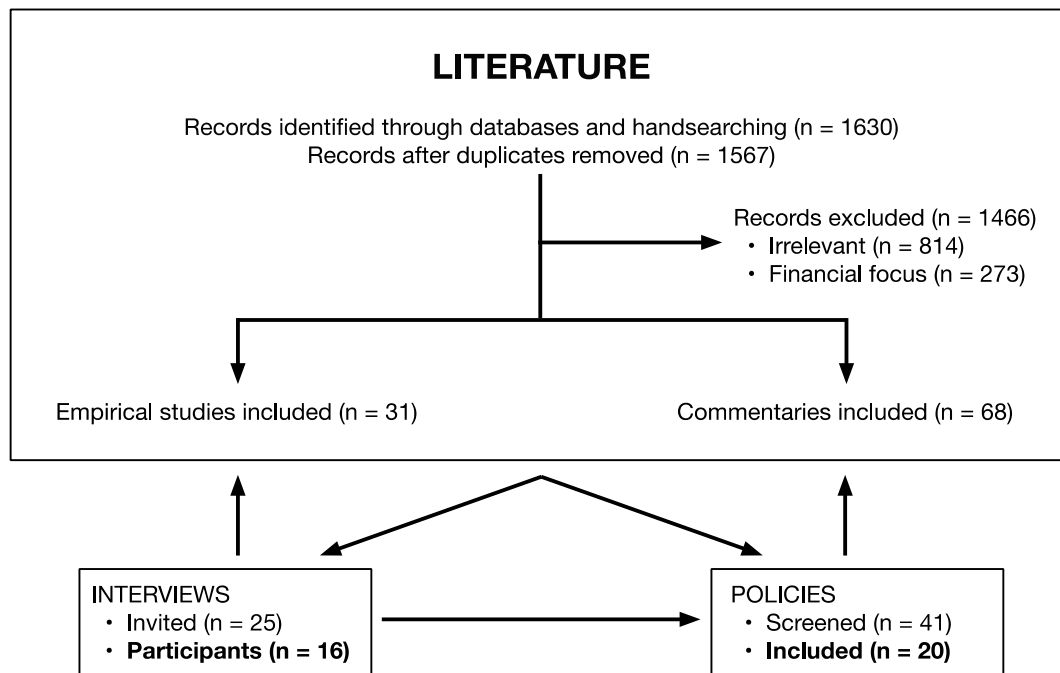


Table S1.

Exploring the significance of non-financial interests in biomedical research and translation

Individual interview guide

Preamble: We are researchers at The University of Sydney interested in understanding how non-financial interests are identified, disclosed and managed within biomedical research and translation. We are particularly interested in your experiences where a non-financial interest was deemed relevant and how you or your colleague dealt with the interest in question.

Question	Prompts	Notes
Tell me about an experience you had [as an editor, as a researcher, as a guideline developer, as a policymaker] where you or a colleague had or had to deal with a non-financial interest.	What was the nature of the non-financial interest? Why was it significant in this situation? How was it dealt with?	The interviewer may refer to specific, published disclosure statements as a prompt.

Ask for other experiences with non-financial interests.		
How do you feel these non-financial interests were managed?	Would you recommend doing anything differently?	

How do you feel non-financial interests <i>should</i> be managed?		
Would you consider non-financial interests influential on research? In what ways?	How would you define a non-financial interest?	

Table S2. Catalog of attributes and relationships that participants and policies labelled as “non-financial conflicts of interest” (n=16 interviews; n=20 policies; n=99 articles)

Personal	Relational	Socio-political	Professional	Intellectual	Material
Grief over death of a pet ¹	Personal antipathy	Advocacy positions	“Careerism”⁹ or career development	A “clearly expressed,” “published opinion,” or comment on the topic	<i>Receipt of funding from global health philanthropic organization with interest in the evaluation outcome of a specific intervention</i>
Achieving fame,² status,³ reputation, prestige, influence, or power	Rivalry or cronyism	Membership in an advocacy organisation⁴	Academic currency in the form of publications and grants,¹⁰ prestigious prizes, or speaking invitations	Advocacy or policy positions on the topic under study¹⁶	
Fulfillment of a desire to do good	History of collaboration	Desire to align with other organisations (e.g. aligning guideline with the CDC)	Medical specialty ^{11,12}	Substantial career effort or interest within the guidelines or review topic area	<i>Consulting for pharmaceutical companies at levels below the threshold for reporting or NIH definition of conflict of interest</i>
Personal sense of worth ²	Family members’ disease conditions (past or present) including hereditary conditions		Special qualification in a psychological therapy ¹³	“Strongly held beliefs” related to a guidelines or review topic area	
Religious beliefs (inflexible³)	Personal relationships,³ including working with spouse	Desire to maintain political power or leadership position	Memberships of professional organisations	Fanaticism about a single issue ⁴	Uncompensated relationships with companies
Membership in a religious organisation			Conference attendance	“Excessive zeal of an investigator in trying to complete a study” ¹⁰	<i>Receipt of industry-sponsored meals or gifts</i>
Political views^{4,5} (clear or fixed)	Concern for the well-being of family or friends ³	Influence of political actors, including lobbyists, over systematic review or guideline processes (e.g. systematic review not favourable to lobbyist’s position so review is “buried in the basement” when the reviewers will not alter the findings)	Invitations (or return invitations) to serve on committees or guideline panels	Researcher allegiance to psychological therapy ¹³	<i>Academic is a company partner; directs support from the grant to company</i>
Sexuality ⁵	Defense of others with parallel or overlapping interests; “gangs”		Employment	Disciplinary conflicts (among specialties or schools of thought) ¹⁴	<i>Evaluating one’s own proprietary (non-pharmacological) intervention (especially if you sell accredited training, books, or manuals)^{6,17}</i>
“Exercises every day and is heavy into exercise”	Familiarity and comradery; “we are all part of the same club” ⁸		Dual-role relationships (e.g. recruiting one’s own patients to a clinical trial)	Leadership role on a related guidelines panel or committee	
Dietary preferences or non-nutritional interventions “that are specific, circumscribed, and adhered to strongly” ⁶			Relationships with government or health care organisations (e.g. employees of Kaiser or the Veterans Administration are “believers”)	Authors of clinical practice guidelines on topic for which they are now doing a systematic review	
Having a medical condition that may benefit from the drug			Geographic or affiliation bias ¹⁴	Authorship of a previous systematic review on the same topic¹⁶	<i>Sale of books or programs based on</i>

being considered for subsidy ⁷			<p>Service to another organization that overlaps with the mission of the guidelines organization</p> <p>Acting as chair or unpaid consultant for relevant organization</p> <p>Opportunity to publish in a peer-reviewed journal</p> <p>Future success in obtaining grant funding for research</p> <p>Professional accolades for obtaining a positive outcome from a particular clinical trial²</p> <p>Long service to government committees or private insurers (e.g. a cost-limiting bias)¹⁵</p>	<p>Authorship of published primary studies included in a systematic review^{11,16}</p> <p>Serving as a peer reviewer on a competing study or review</p> <p>Using editorial role to shape a study and its interpretation in favour of one's views</p> <p>"Confluence of thinking" resulting from review leaders and technical experts being of the same specialty</p> <p>Bias towards pre-clinical animal models that are more accessible but less relevant to human health</p>	<p><i>one's nutrition or dietary research</i>⁶</p> <p><i>Clinical income derived from a particular procedure or intervention</i>^{11,15}</p> <p><i>Acting as an expert witness</i></p>
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Legend: This table shows the range of attributes and relationships that participants termed "non-financial conflicts of interest," some of which are implemented in current policy, some of which have been reported by an individual in a leadership role, were proposed in a scholarly or policy forum, or were directly experienced as what participants termed 'non-financial conflicts of interest.'

Bolded items indicate attributes or relationships covered by conflict of interest policies in Table 2.

Italicized items indicate financial interests that were labelled by participants and policies as "non-financial."

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Table S3. Definitions and examples of non-financial conflicts of interest in conflict of interest policies (n = 20)

Organisation	Policy	Date	Definition of non-financial conflicts of interest	Examples of covered non-financial interests
Professional associations				
Institute of Medicine of the National Academies	COI in Medical Research, Education and Practice	2009	A conflict of interest is a set of circumstances that creates a risk that professional judgment or actions regarding a primary interest will be unduly influenced by a secondary interest. Secondary interests may include not only financial gain but also the desire for professional advancement, recognition for personal achievement, and	Professional advancement Recognition for personal achievement Favors to friends and family or to students and colleagues.
Royal Australian College of Physicians	Guidelines for ethical relationships between physicians and industry	Aug 2018	When a relationship or practice gives rise to two conflicting interests, a conflict of interest exists. A non-pecuniary interest is a goal or benefit not linked directly with material gain.	Personal relationships Personal motivations or beliefs that might limit or obstruct my open consideration of the issues [at hand] Family or other commitments Enhancement of career and the possibility of acquiring professional recognition, status or fame Individual belief systems that may influence decision making Membership of religious and political groups Adherence to ideologies that guide the operations of institutions
Journals				
PLoS journals	Competing Interests	Sep 2008	A competing interest is anything that interferes with, or could reasonably be perceived as interfering with, the full and objective presentation, peer review, editorial decision-making, or publication of research or non-research articles submitted to PLOS. Competing interests can be financial or non-financial, professional, or personal.	Acting as an expert witness Membership in a government or other advisory board Relationship (paid or unpaid) with organizations and funding bodies including nongovernmental organizations, research institutions, or charities Membership in lobbying or advocacy organizations Writing or consulting for an educational company Personal relationships (e.g. friend, spouse, family member, current or previous mentor, adversary) with individuals involved in the submission or evaluation of a paper

				Personal convictions (political, religious, ideological, or other) related to a paper's topic that might interfere with an unbiased publication process
World Association of Medical Editors	COI Policy Statement	Jul 2009	<p>Conflict of interest exists when there is a divergence between an individual's private interests (competing interests) and his or her responsibilities to scientific and publishing activities such that a reasonable observer might wonder if the individual's behavior or judgment was motivated by considerations of his or her competing interests. Many kinds of competing interests are possible.</p> <p>Journals often have policies for managing financial COI . . . However, other competing interests can be just as damaging, and just as hidden to most participants, and so must also be managed.</p>	<p>Academic commitments including strong beliefs ("intellectual passion") that commit [participants] to a particular explanation, method, or idea</p> <p>Personal relationships with family, enemies, competitors, or colleagues</p> <p>Strong commitment to a particular political view (e.g., political position, agenda, or party) or having a strong religious conviction</p> <p>Direct affiliation with an institution that on the face of it may have a position or an interest in a publication</p>
British Medical Journal	Competing interests policy	Mar 2014	A competing interest — often called a conflict of interest — exists when professional judgment concerning a primary interest (such as patients' welfare or the validity of research) may be influenced by a secondary interest (such as financial gain or personal rivalry).	<p>Strongly held beliefs relevant to the task at hand</p> <p>Unpaid positions that might have a bearing on the product or service being delivered by the BMJ including:</p> <ul style="list-style-type: none"> • officership of advocacy, charity, non-governmental organisation, or relevant professional group; • membership of a guidelines panel; • advisory positions in commercial organisations <p>Personal relationships with authors or editors of material, including having held grants, co-authored articles or papers, or worked together</p>
Nature	Nature Research journals'	Jan 2018	Competing interests are defined as . . . non-financial interests that could directly undermine, or be perceived to undermine the objectivity,	<p>Unpaid membership in a government or non-governmental organization</p> <p>Unpaid membership in an advocacy or lobbying organization</p> <p>Unpaid advisory position in a commercial organization</p>

	competing interests policy		integrity and value of a publication, through a potential influence on the judgements and actions of authors with regard to objective data presentation, analysis and interpretation.	Writing or consulting for an educational company Acting as an expert witness
ICMJE	ICMJE Recommendations for publishing in medical journals	Dec 2018	A conflict of interest is a set of circumstances that creates a risk that professional judgment or actions regarding a primary interest will be unduly influenced by a secondary interest. Conflicts can occur for other reasons, such as personal relationships or rivalries, academic competition, and intellectual beliefs.	Other relationships or activities that readers could perceive to have influenced, or that give the appearance of potentially influencing, what you wrote in the submitted work
Systematic reviews				
Agency for Healthcare Research and Quality	Identifying and Managing Nonfinancial Conflicts of Interest for Systematic Reviews (Methods Research Report)	May 2013	A set of circumstances that creates a risk that the primary interest – the quality and integrity of the systematic review – will be unduly influenced by a secondary or competing interest that is not mainly financial.	Personal or affiliated organisational policy or advocacy positions Training and experience in a particular specialty “Everyone knows everyone” or limited availability of content expertise Strong and unwavering personal beliefs Personal relationships (including those that are adversarial) among investigators and the authors of studies eligible for the review; networks of relationships among family, friends, partners, colleagues, and the authors of the eligible studies Investigator’s institutional role Desire for career advancement
Cochrane Collaboration	Commercial sponsorship policy	May 2014	Other relationships or activities that readers could perceive to have influenced, or that give the appearance of potentially influencing, what you wrote in the submitted work.	Authorship of primary studies included in the systematic review
Clinical guidelines and scientific committees				

Grundy et al. (2020) Conflict of interest as ethical shorthand. *J Clin Epi*, 120: 1-7.

National Academy of Science	National Academy of Science committee composition and conflict of interest	May 2003	Any . . . other interest which conflicts with the service of the individual because it (1) could significantly impair the individual's objectivity or (2) could create an unfair competitive advantage for any person or organization.	Reviewing one's own work: critical review and evaluation of the individual's own work, or that of his or her immediate employer, is the central purpose of the activity. Significant, directly related interest or duty associated with a fixed position on a particular issue (e.g. president of professional society making public statements on the topic)
American Thoracic Society (ATS)	Policy Statement: Managing Conflict of Interest in Professional Societies	May 2009	Personal, intellectual, or academic relationships that interfere with an individual's ability to consider or interpret the full breadth of available data or alternative points of view objectively.	Inability to review a grant, manuscript, or project proposal objectively due to competition for funding, timing of publication, or professional stature Pre-existent beliefs
American College of Chest Physicians (ACCP)	COI policy for guideline panel	Jun 2018	Any activities that create the potential for attachment to a specific predetermined point of view that could be perceived to affect one's judgment in the evaluation of specific recommendations or suggestions.	Authorship in scientific peer-reviewed publications Authorship in non-scientific publications Authorship of textbooks/chapters
Institute of Medicine of the National Academies	Clinical Practice Guidelines We Can Trust	2011	Any activities that create the potential for attachment to a specific predetermined point of view that could be perceived to affect one's judgment in the evaluation of specific recommendations or suggestions. A person whose work or professional group fundamentally is jeopardized, or enhanced, by a guideline recommendation is said to have intellectual COI.	Authoring a publication or acting as an investigator on a peer-reviewed grant directly related to recommendations under consideration

World Health Organization (WHO)	WHO Handbook for Guidelines Development (2 nd edition)	2014	Nonfinancial interests . . . cannot readily be measured in monetary units and are less tangible and thus more difficult to identify, measure and manage. They include any interest that could be reasonably perceived to affect an individual's objectivity and independence while working with WHO. . . Nonfinancial interests include academic, professional, and personal interests. Financial and nonfinancial interests can overlap.	<p>Technical expert's desire to publish or obtain funding for his or her research</p> <p>Stakeholder's desire to advocate for a disease or condition</p> <p>Desire for professional advancement or prestige or a drive to publish, to obtain research funding, or to improve one's personal standing in the scientific community</p> <p>Intellectual conflict of interest: academic activities that create the potential for an attachment to a specific point of view that could unduly affect an individual's judgment about a specific recommendation</p> <p>Prior publication of a study or systematic review that is part of the evidence base under consideration in the guideline;</p> <p>Prior public declaration of a firm opinion or position, as in public testimony during a regulatory or judicial process, or in an editorial in a journal</p> <p>Professional or personal affiliation with an organization advocating for products or services related to the subject of the guideline</p>
Guidelines International Network (GIN)	Principles for Disclosure of Interests and Management of Conflicts in Guidelines	Oct 2015	Indirect COIs . . . relate to such issues as academic advancement, clinical revenue streams, and community standing. Intellectual COIs, including attachment to ideas or academic activities that create the potential for an attachment to a specific point of view belong in the latter category. These COIs may ultimately lead to indirect financial gain related to salaries or other benefits resulting from academic advancement.	<p>Having published on a topic that expresses an opinion on the effectiveness of an intervention or doing research on a topic that could be affected by a recommendation</p> <p>Being an acknowledged expert in the intervention</p> <p>Leadership or board or committee memberships</p> <p>Involvement with an advocacy group that may gain from a guideline</p> <p>Personal convictions or positions (e.g. political, religious, ideological, or other)</p>
United States Preventive Services Task Force	U.S. Preventive Services Task Force	Dec 2015	Non-financial conflicts of interest are other relationships, activities, or stated positions that could influence or give the appearance of influencing the work of a member of the	<p>Public comments and testimony</p> <p>Leadership role on a panel</p> <p>Substantial career efforts/interests in a single topic area</p> <p>Previously published opinions</p> <p>Advocacy or policy positions</p>

	Procedure Manual		USPSTF. . . These disclosure requests are intended to identify strongly held opinions that may not be open to alternative conclusions even if provided with adequate evidence to the contrary. It also includes interests or institutional relationships that are not direct financial COIs but may influence or bias the individual.	
National Health and Medical Research Council (NHMRC)	NHRMC Guidelines for Guidelines conflict of interest module	Nov 2018	<p>A conflict of interest is a set of circumstances that creates a risk that professional judgment or actions regarding a primary interest will be unduly influenced by a secondary interest.</p> <p>Conflicts of interest may also arise if guideline development group members serve as representatives of organisations with an interest in the guideline recommendations.</p>	<p>Represent, or have roles in, organisations which advocate known industrial or policy positions</p> <p>Personal relationships with those who may have the above interests</p>
Regulatory science				
Environmental Protection Agency (EPA)	Memo RE: Strengthening and Improving Membership on EPA Federal Advisory Committees; Peer Review Handbook	Oct 2017 Oct 2015	Candidates should be independent from the Agency, must avoid any conflicts of interest within the scope of their review, and should be fully committed to serving the Agency and the public.	<p>Receipt of EPA grants as a principal investigator or</p> <p>Public statements or taken positions on or closely related to the subject topic under review</p> <p>Previous involvement with the development of the document (or review materials)</p>
Food and Drug Administration (US)	Policies and Procedures for	Feb 2000 Jun	Circumstances other than those specifically described [that] may raise a question about the member's	Professional, social, or other relationships that are not technically a "covered relationship" under section 502; e.g. the

	Handling Conflicts of Interest with FDA Advisory Committee Members Consultants and Experts; Procedures for Evaluating Appearance Issues and Granting Authorizations for Participation in FDA Advisory Committees	2016	impartiality; other interests and relationships that do not create a recusal obligation under Federal conflict of interest laws but that may create the appearance that a member lacks impartiality, known as “appearance issues.”	member is a close friend with the patent holder on the product at issue Past involvement in a lawsuit related to the product(s) or issues before the committee or otherwise involving the sponsor Involvement as a subject in a clinical trial of one of the products at issue.
NICE	Policy on declaring and managing interests for NICE advisory committees	Apr 2018	There is a conflict of interest when a reasonable person would consider that an individual’s ability to apply judgement or act in the work of NICE is, or could be perceived to be, impaired or influenced by one of their interests. . . Where an individual obtains a non-financial professional or personal benefit, such as increasing or maintaining their professional reputation, from the consequences of a decision they are involved in making.	Advocate for a particular group or is a member of a lobbying or pressure group with an interest in health or social care Holds office or a position of authority in a professional organisation such as a royal college, a university, charity, or advocacy group Actively involved in an ongoing or scheduled trial or research project aimed at determining the effectiveness of a matter under review Has published a clear opinion about the matter under consideration Has authored or co-authored a document submitted as an evidence publication to the relevant NICE advisory committee