aimos
Association for Interdisciplinary Meta-research and Open Science

AIMOS2025

The seventh annual conference of the Association for Interdisciplinary Meta-research & Open Science

Wednesday 19 November 2025 – Friday 21 November 2025
The University of Sydney

Hosted by the Association for Interdisciplinary Meta-research & Open Science (AIMOS) and the Evidence, Policy and Influence Collaborative (EPIC), the University of Sydney.

AIMOS2025 is jointly hosted by:

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THE UNIVERSITY OF SYDNEY

Sponsored by:

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About AIMOS 2025

The purpose of AIMOS is to make the research process more trustworthy and efficient, and to promote the study of how research is done and how it can be improved. Our annual conference is an important collaborative space that advances this purpose.

AIMOS2025 will bring together researchers from multiple disciplines to talk about how research is done and how we can do it better. AIMOS2025 will be held on November 19–21 at The University of Sydney, in Camperdown, on the lands of Gadigal people of the Eora Nation.

This year, AIMOS is engaging in an exciting partnership with the Evidence, Policy, and Influence Collaborative (EPIC) at the Charles Perkins Centre, University of Sydney, to spotlight commercial determinants of health at AIMOS2025.

Commercial determinants of health refer to private sector activities that influence public health, and the political and economic systems and norms that enable them. Corporate or industry sponsorship of health and other research can bias how studies are designed, conducted, analysed and reported, and systematically over- or underestimate true research findings to present conclusions that favour the sponsor's product. Examples of corporate influence on research are known in big food, tobacco, pharmaceuticals, gambling, alcohol, and the environment on health. Minimising bias in research due to corporate influence, as well as methodological limitations are essential to research integrity and public policy.

At AIMOS2025, speakers and sessions will explore both the metaresearch issues we are known for, as well as the influences of commercial determinants of health, policy responses, and solutions to address these biases.

Conference Organising Committee

AIMOS Team Members

Jen Beaudry
(President & Co-Chair)

Joanna Diong
(Co-Chair)

Jason Chin

Kylie Hunter

Aidan Tan

Annie Whamond

EPIC Team Members

Barbara Mintzes

Lisa Parker

Kellia Chiu

Nicholas Chartres

PROGRAM

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Charles Perkins Centre
Main Room

WEDNESDAY

09:30	Welcome
10:00	P01: Plenary – Lisa Bero
11:00	Morning Tea
11:30	M01: Mini-notes: – Systematic Reviews (David Nguyen, Matthew Page, Phoebe Nguyen)
12:30	Lunch
13:30 – 17:00	Please head to SWHB for more sessions

Charles Perkins Centre
Auditorium (basement)

17:15	Drinks & Nibbles
18:00	P02: Plenary – Ivan Oranksy

PROGRAM

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SWHB401

WEDNESDAY

09:30 – 13:30	Please head to CPC Main for more sessions
13:30	L01: Lightning Talks – Behavioural Science and Rigour (Jan Feld, Adrian Barnett & Matt Spick, Laura Conlon)
14:00	L04: Lightning Talks – Contributors/authors (Keren Yu, Malgorzata Lagisz & April Robin Martining)
14:30	Afternoon Tea
15:00	D01: Discussion – Behind the Screens: Real Cases and Tools for Research Integrity (Elena Vicario)
16:00	W01: Workshop – Inferences of Intent in Scientific Fraud Investigation (Eugenie Reich)
17:00 – 19:00	Please head to CPC Auditorium (basement) for the Public Plenary

PROGRAM

SWHB402

WEDNESDAY

09:30 – 13:30	Please head to CPC Main for more sessions
13:30	L02: Lightning Talks – CDOH (Akihiko Ozaki, Deborah Gleeson, Mofi Islam & Cassandra de lacy-Vawton, James Larkin)
14:00	L05: Lightning Talks – Health (Ledetu Getinet Tiruneh, Nikitha Rajeev, Ade Oyekanmi, Joanne Lim, Adrian Barnett, Mark Jones & Paulina Stehlik, Gongkai Ye, Janice Graham, Kamila Navarro, Professor Barbara Mintzes, Zhaoli Dai-Keller, Martin Héroux & Joanna Diong)
14:30	Afternoon Tea
15:00	D02: Discussion – Commercial use of feminist empowerment messages to sell a product (Barbara Mintzes, Brooke Nickel, Emma Gram, Tessa Copp, Jenna Smith, Jolyn Hersch, Kristen Pickles, & Kirsten McCaffery)
16:00	W02: Workshop – Maximising Research Outcomes with Secondary Use of Health Data Investigation (Amany Gouda-Vossos & Mark Maclean)
17:00 – 19:00	Please head to CPC Auditorium (basement) for the Public Plenary

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PROGRAM

SWHB411

WEDNESDAY

09:30 – 13:30	Please head to CPC Main for more sessions
13:30	L03: Lightning Talks – Integrity (Alexander Gibson, Kylie Hunter, Eugenie Reich, Paulina Stehlik, Caroline Dowsett, Ximena Camacho, Sharifa Nasreen, Nicole Pratt, Sallie-Anne Pearson & David Henry)
14:00	L06: Lightning Talks – Sports and Animals (Kylie Hunter, Ran Tian, Tomoya Salto, Natalie Anderson, R. Smith)
14:30	Afternoon Tea
15:00	D03: Discussion – A Research Integrity lens on the use of Generative AI and its risks to research (Kate Organ)
16:00	W03: Workshop – Understanding commercial determinants of physical activity (Adrian Bauman & Mark Pettigrew)
17:00 – 19:00	Please head to CPC Auditorium (basement) for the Public Plenary

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PROGRAM

Charles Perkins Centre
Main Room

THURSDAY

08:00	AIMOS Annual General Meeting
09:00	M02: Mini-notes – Commercial Determinants of Health (Matthew Herder, Karen Lee & Adrian Bauman, Akemi Hara & Akihiko Ozaki)
10:00	Morning Tea
10:30	D04: Discussion – What does ideal education in publication integrity look like? (Pranujan Pathmendra, Adrian Barnett, & Jennifer Byrne)
11:30	H01: Hackathon: How can we better manage conflicts of interest? (Barbara Mintzes, Lisa Bero, Lisa Parker, James Larkin, Katherine Cullerton, Akihiko Ozaki, Cinzia Colombo, Anthony Brown, Adam Dunn, Jason Chin, Kellia Chiu, Joanna Diong, Belinda Townsend, Matthew Herder, & Janice Graham)
12:30	Lunch
13:30	M03: Mini-notes – Research Integrity (James Heathers, Annie Whamond, Luciana Machado)
14:30 – 17:30	Please head to SWHB for more sessions

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PROGRAM

SWHB401

THURSDAY

08:00 – 10:30	Please head to CPC Main for more sessions
10:30	D05: Discussion – Measurement Critic's Challenge (Wendy Higgins)
11:30	D08: Discussion – Help us improve RegCheck (Beth Clarke, Jamie Cummins & Malte Elson)
12:30 – 14:30	Please head to CPC Main for Lunch and more sessions
14:30	L07: Lightning Talks – Transparency (Tatiana Chakravorti, Olmo van den Akker, Lee Jones, Adrian Barnett & Dimitrios Vagenas, Karl Huang)
15:00	Afternoon Tea
15:30	D09: Discussion – AIMOS and MetaROR (Adrian Barnett, Jennifer Byrne, Jason Chin & Alex Holcombe)
16:30	H02: Hackathon – Improving research assessment by stealth (Ginny Barbour, Janet Catterall)
18:00	Please join us at the Marlborough Hotel for the Social

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SWHB402

THURSDAY

08:00 – 10:30	Please head to CPC Main for more sessions
10:30	D06: Discussion – Evidence, Evidence-based policymaking, and the Commercial Determinants of Health (Mark Petticrew)
11:30	W04: Workshop – Image Integrity in Research (Matt McCoy)
12:30 – 14:30	Please head to CPC Main for Lunch and more sessions
14:30	L08: Lightning Talks – Efficiency and Errors (Madeleen van der Merwe, Gerben ter Riet & Anne de Jong, Inika Sharma, Jacques Raubenheimer)
15:00	Afternoon Tea
15:30	D10: Discussion – The types of decisions research evaluators make (Ger Post)
16:30	D12: Discussion – Designing a Framework for Reporting Guidance in Environmental Evidence Synthesis (Kyle Morrison)
18:00	Please join us at the Marlborough Hotel for the Social

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THURSDAY

08:00 – 10:30	Please head to CPC Main for more sessions
10:30	D07: Discussion – Addressing journal editors' failure to retract (Jon Jureidini, Leemon McHenry & George (Skip) Murgatroyd)
11:30	W05: Workshop – Achieving complete computational research reproducibility using containers (Mark Ziemann)
12:30 – 14:30	Please head to CPC Main for Lunch and more sessions
14:30	L09: Lightning Talks – Ethics and Diversity (Danjuma Saidu, Cooper Smout, Anna Finnane, Matthew Ruby, Aidan Tan, Ginny Barbour & Adrian Barnett, Reneepearl Kim P. Sales, Lynnell Alexie D. Ong, & Soumyadeep Bhaumik)
15:00	Afternoon Tea
15:30	D11: Discussion – Mitigating risks for whistle-blowers (Vincent Mourik)
16:30	D13: Discussion – Why do funders not fund meta-research (Soumyadeep Bhaumik, Reneepearl Kim P. Sales)
18:00	Please join us at the Marlborough Hotel for the Social

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Charles Perkins Centre
Main Room

FRIDAY

09:30	W07: Workshop: Improving observational studies of interventions through target trial emulation (Harrison Hansford & Aidan Cashin)
10:30	Morning Tea
11:00	P03: Plenary – Nicholas Chartres
11:50	Conference Close

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SWHB401

FRIDAY

08:30	W06: Workshop – Retrieving Scholarly Metadata with R (Annie Whamond)
09:30	W08: Workshop – Safeguarding Research Integrity with the Updated IPD Integrity Tool (Kylie Hunter & David Nguyen)
10:30 – 12:00	Please head to CPC Main for morning tea and more sessions

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FRIDAY

08:30	H03: Hackathon – CTLlama: A new language model to enable meta-research involving clinical trials (Xumou Zhang, Qixuan Hu, Angela Pan & Adam Dunn)
10:30 – 12:00	Please head to CPC Main for morning tea and more sessions

PROGRAM

SWHB411

FRIDAY

08:30	H04: Hackathon – Using industry disclosure data to examine financial relationships with clinicians and patient organisations (Ashleigh Hooimeyer, Kellia Chiu, Akihiko Ozaki, Akemi Hara & Barbara Mintzes)
10:30 – 12:00	Please head to CPC Main for morning tea and more sessions

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AIMOS conference abstracts 2025

Contents

Disclaimer: To save time, titles and abstracts were cleaned using M365 Copilot through University of Sydney access using prompt: "in this spreadsheet, can you please (i) change all title cells to Title Case, and (ii) in the abstract column, replace ASCII corruptions with their symbol or remove where unknown. There should be no alterations to the legible text, these are submitted abstracts and it is important that all wording is retained as presented."

If you are an author and notice unexplained alterations, please email aimos.inc@gmail.com to request a correction.

Information correct as at: 12 November, 2025. Abstracts shown in date/time order.

Wednesday 19 November

10:00: Plenary 1 (main)

Chair: Barbara Mintzes

Name: Lisa Bero

Title: Commercial Influence On Research: What, How And Why

Abstract: Commercial determinants of health are activities of the private sector that affect the health of populations. Manipulating scientific research and publication is a strategy used by corporate interests to minimize harms and maximize benefits of their products in order to increase profits while influencing health. Meta-research tells us what is going on. Meta-research describes the direction and magnitude of "funding" bias in pharmaceutical, nutrition, tobacco, and other health research. Additional types of evidence show how sponsors influence research agendas, the design of studies, the actual conduct of studies, and whether study results are published in full or not. Qualitative research, particularly from previously secret internal industry documents, provides insight into why commercial interests influence research. Understanding the what, how and why of commercial influence on research provides many opportunities for research institutions to counter industry influence on science.

11:30: Mini-notes 1 - Systematic Review (main)

Chair: Kylie Hunter

Name(s): David Nguyen

Title: Approaches To Dealing With Missing Data In Individual Participant Data Meta-Analyses Of Randomised Trials.

Abstract: In health research, individual participant data (IPD) meta-analysis is a flexible and powerful study design that involves the collection and harmonisation of raw data for each participant across multiple related studies. One of the benefits of an IPD meta-analysis is that consistent analytical decisions can be made about how to handle missing data in each of the included studies.

However, there are a multitude of missing data approaches available, each with their own underlying assumptions and varying impacts on the validity and precision of treatment effect estimates. It is currently unclear which missing data approaches are currently being used in IPD meta-analyses and what assumptions are being made about them.

To address this gap, we conducted a methodological review of IPD meta-analyses of randomised trials between 2020 and 2023. From a systematic search, we randomly sampled 100 IPD meta-analyses, stratified by publication year. We extracted data on study characteristics, the types and extent of missing data, assumptions made about the missing data, and analysis methods used to handle missingness.

Preliminary findings will be presented and will inform recommendations for improving the handling and transparent reporting of missing data in IPD meta-analysis, contributing to more robust evidence synthesis in clinical research.

Name(s): Matthew Page

Title: Unified Prisma Statement: Harmonising The Prisma Reporting Guidelines For Systematic Reviews Of Interventions.

Abstract: Background: The PRISMA statement and its extensions have been developed to improve the reporting of a broad spectrum of systematic reviews. However, the independent and asynchronous nature with which these reporting guidelines have been developed has led to important inconsistencies in their content and structure, which makes implementation difficult for users. Objectives: To develop a unified PRISMA statement that harmonises content across the PRISMA reporting guidelines. Methods: We included PRISMA reporting guidelines for systematic reviews of the effects of health interventions, which

were available before June 30, 2023. Reporting recommendations from each guideline were extracted by one author, with verification by another. Two authors independently coded each recommendation as common, similar or unique to the guideline. One author drafted proposals for each recommendation (e.g. include, remove, harmonise wording) and sought and incorporated feedback on these proposals from the developers of each extension. Results: Across the 13 included PRISMA guidelines, we extracted 453 items and 848 elements (i.e. more detailed reporting recommendations within each item). After harmonisation, we have 50 unique items and 465 unique elements; however, for nearly all reviews, only a subset of these items and elements will apply. Conclusions: The unified PRISMA statement will be incorporated into freely accessible web applications for writing and peer reviewing systematic reviews, enable more efficient translation of reporting guidelines into practice.

Name(s): Phi-Yen (Phoebe) Nguyen

Title: Reproducibility Of Meta-Analytic Results In Systematic Reviews Of Interventions: A Meta-Research Study.

Abstract: Aim: To investigate if results of meta-analyses are reproducible (i.e. others can obtain sufficiently similar results when reanalysing the same data using the same methods). Methods: For 121 systematic reviews indexed in 5 databases in November 2020, we contacted review authors to obtain data files and analytic code used to generate the first reported meta-analysis. If not provided, we extracted the necessary data and details of statistical methods from the reports. Two investigators independently re-run each meta-analysis using original computational steps and code. We classified meta-analyses as fully reproducible if the difference between original and reproduced summary estimates and 95% confidence interval (CI) widths was <10%. We classified differences as meaningful if the direction or statistical significance of the summary estimate changed. Results: 22 authors provided data files and/or analytic code; for the remainder we extracted data from reports. 104 meta-analyses (86%) were fully reproducible, 7 (6%) were not fully reproducible, and 10 (8%) had insufficient data available to attempt reproduction. No meaningful differences were found in the reproduced meta-analytic results. We will discuss challenges encountered during reproduction (e.g. low response rate from review authors and unclear information in reports), and provide recommendations to make reproduction more efficient. Conclusion: Meta-analysis results could be reliably replicated if the original data and/or analytic code could be obtained or if the necessary data was accessible in the reports.

13:30: Parallel Sessions

Lightning talks 1 - Behavioural Science and Rigour (SWHB401)

Chair: Jen Beaudry

Name(s): Jan Feld

Title: Why We'Re Not Making Progress: Mapping The Mess In Behavioural Science.

Abstract: Behavioural science research often suffers from a double challenge. On one hand, studies tend to rely on narrow designs convenient samples (like students or WEIRD populations) and standardised measures that capture only a thin slice of the real world. On the other hand, human behaviour is deeply context-dependent, and studies differ often silently along many dimensions: population, incentives, stakes, framing, and more. This combination can lead to two familiar outcomes: inconsistent results that are hard to reconcile, or consensus that might collapse when studies are extended to new contexts. To address these challenges, I propose the use of Design Spaces: structured, multidimensional maps that lay out key features of research designs that could affect results such as sample type, incentive structure, and outcome domain. Each axis represents a potential source of heterogeneity. With wider adoption, Design Spaces can help behavioural science in three ways: (1) they clarify which dimensions of heterogeneity might matter; (2) they encourage researchers to describe where their study sits within the design space, making it easier to integrate findings across studies; and (3) they reveal neglected regions of the design landscape where new research could be especially valuable. Design Spaces can be a practical tool to help us better coordinate research and tackle the complexity of human behaviour.

Name(s): Adrian Barnett & Matt Spick

Title: Who Opts For Open Peer Review?

Abstract: Since 2019, the publisher PLOS has given authors the option of publishing the peer review history if their article is accepted. This includes the decision letters, editorial feedback and peer reviewers comments, and the authors responses. We examined the characteristics of articles that opted for open peer review, including the countries and article types most likely to opt in to peer review. We used an elastic net to estimate the predictors. We included over 112,000 articles, with 40% opting in to open peer review. Nepal and Ethiopia had the biggest increases in the probability of opting for open peer review (around 0.10 higher than average), whilst Serbia and Tunisia had the biggest decreases (around 0.08 lower). 'Methods and Resources' articles had a 0.15 higher probability than average of opting for open peer review. Articles with open peer review were far less likely to be retracted, with a hazard ratio for the time from publication to retraction of 0.44 (95% CI 0.35 to 0.56; Cox survival model). Most authors do not opt for open peer review and there are large differences in who does. Opting for open peer review could be a marker of article quality by signalling author teams who welcome transparency in all aspects of their research.

Name(s): Laura Conlon

Title: Apples, Bad Apples, And Oranges: The Concerns About Meta-Analysis.

Abstract: Evidence synthesis, particularly meta-analysis, is treated as a 'gold standard' of scientific evidence. It is relied upon to inform clinical treatments, policy decisions, and other real-world applications of research. However, a meta-analysis is only as credible as the (least credible) primary studies that it includes. We argue that meta-analysis is a prime opportunity for post-publication critique, and indeed that such critical appraisal is necessary for valid meta-analyses. In the field of psychology, the replication crisis demonstrated that even studies published in influential journals are more likely to contain false positives, questionable research practices, and fraud than previously assumed. It is therefore crucial that primary studies are critically evaluated before they are included in a meta-analysis. We present an in-progress project investigating the prevalence of quality assessments in published meta-analyses in social and personality psychology.

Lightning talks 2 - Commerical Determinants of Health (SWHB402)

Chair: Nick Chartres

Name(s): Akihiko Ozaki

Title: From Tacit Tolerance To Transparency: Bribery And Procurement Reform In Japan'S Medical Device Sector.

Abstract: Japan is widely viewed as low-corruption, yet recurring scandals in its medical device sector reveal durable vulnerabilities. This presentation synthesizes historical incidents, law and self-regulation, and procurement dynamics to explain how inducements persist and how enforcement has evolved. Drawing on landmark cases-from GE/Yokogawa (1991) and Olympus's overseas kickbacks (2006-2016) to Nihon Kohden's donation-for-contracts scheme (2015-2021) and Zeon Medical's per-stent rewards (2023)-we map mechanisms that exploit opaque pricing, wholesaler intermediation, and physician-led committees. We analyze gaps in statutory coverage (limited reach in private-hospital settings, modest corporate penalties) and the consequences of relying on episodic enforcement, often led by foreign authorities. We also evaluate recent reforms: transparency codes, strengthened internal controls, and compliance overhauls following investigations. Despite progress, deterrence remains fragile. We argue for codifying commercial bribery independent of public-official status; raising corporate sanctions; standardizing HTA-informed, price-transparent procurement; and mandating routine, audited, named disclosures of financial transfers to clinicians and patient organizations. These steps would align market incentives with patient benefit and fair competition, and reduce recidivism risk in Japan's device market. Our synthesis offers a practical blueprint for hospital leaders, regulators, and manufacturers to curb conflicts and secure value-based purchasing.

Name(s): Deborah Gleeson, Mofi Islam & Cassandra de Lacy-Vawdon

Title: The Need For Research On Commercial Practices Of Small-Medium Enterprises In Developing Countries

Abstract: Research on the Commercial Determinants of Health (CDoH) to date has largely focused on high-income countries and large commercial entities, with limited scholarly literature available on the practices of smaller commercial entities in low- and middle-income countries (LMICs). However, LMICs bear the largest public health burden arising from harmful commercial activities, and the majority of commercial entities in these countries are small and medium enterprises (SMEs). This lightning talk aims to explore specific harmful commercial practices used by SMEs in LMICs, illustrate the heavy public health burden involved, and make a case for further attention to these issues in research and policy action. There is an urgent need for CDoH research in LMIC contexts, which includes documenting and monitoring the activities of SMEs and their health consequences. Involvement of researchers from LMICs in this research is essential, along with attention to developing capacity in this area. Minimising the harms of these types of commercial practices will require local regulatory action, along with support from intergovernmental organisations such as the World Health Organization.

Name(s): James Larkin

Title: Is Co-Owning An Alcohol Company And A Pharmaceutical Company A Conflict Of Interest: A Case Study.

Abstract: Companies producing health-harming products (e.g. alcohol) are often excluded from health policy making since their financial incentives are often contrary to public health goals. This study aims to give an overview of Kirin Holdings, which has alcohol and pharmaceutical subsidiaries, to assess a) conflicts of interest (COIs) and b) if co-ownership of a pharmaceutical company (Kyowa Kirin) can facilitate access to policy makers and policy spaces for an alcohol company.

Methods involved 1) mapping Kirin Holdings' revenue to identify COIs, 2) thematically analysing annual reports and 3) analysing Kyowa Kirin payments to healthcare organisations.

Kirin Holdings' revenue in 2024 came primarily from alcohol (yen1,082 billion, 46.3% of revenue), beverages (yen565 billion, 24.2%), pharmaceuticals (yen495 billion, 21.2%), and health sciences (yen175 billion, 7.5%). Thematic analysis showed that the alcohol domain is the backbone of the group and that Kirin Holdings and Kyowa Kirin engage in corporate political activity (e.g. reputation management). In 2022-2024, Kyowa Kirin made EUR4,845,664 in payments to healthcare organisations and patient organisations in the UK, EUR170,027 in Ireland, EUR8,769,218 in Japan (2022-2023 only) and EUR548,489 to teaching hospitals in the US, for sponsorship, donations and consultancy.

Kirin Holdings' have significant revenues from alcohol, creating COIs for Kyowa Kirin. The findings show risks that pharmaceutical subsidiaries of alcohol producers may be used to allow access to policy-makers, bypassing usual exclusions.

Lightning talks 3 - Integrity (SWHB411)

Chair: Annie Whamond

Name(s): Alexander Gibson

Title: Poor Data Provenance In Published Clinical Prediction Model Research.

Abstract: Good data provenance is essential for the development and implementation of clinical prediction models into practice. Clinical prediction models that are developed on data without necessary provenance or the ability to verify its authenticity can lead to misguided clinical decisions and place patients at risk of harm. We have identified two public data sets with poor data provenance, making them unfit for clinical use, on the competition website Kaggle. For example, neither data set includes the country or clinical setting where the data were collected or the dates. The datasets are a stroke prediction dataset that has been used 155 times in published research and a diabetes prediction dataset with 33 uses. Exploratory analyses have identified the stroke prediction dataset to be potentially simulated or fake, while the diabetes dataset is most likely fake. Initial audits have revealed a model developed from the stroke data being used in a publicly

available clinical decision tool, potentially putting patients at risk. It is unlikely that the two datasets are unique cases, with clinical prediction models or the broader health and medical research. We will present our ideas for the actions needed by authors, peer reviewers and journals to improve data provenance.

Name(s): Kylie Hunter

Title: The Updated Ipd Integrity Tool For Assessing The Trustworthiness Of Randomised Controlled Trials.

Abstract: Increasing concerns about the trustworthiness of research have prompted calls to scrutinise studies' individual participant data (IPD) since they enable more comprehensive integrity checks. Yet, guidance on how to do this was lacking.

We aimed to address this gap by developing the IPD Integrity Tool to screen randomised controlled trials (RCT) for integrity issues. Development involved: 1) a literature review, 2) consultation with an expert advisory group, 3) piloting and preliminary validation, and 4) evaluation and refinement.

The Tool consists of 31 items (13 study-level, 18 IPD-specific). IPD-specific items are automated where possible, and are grouped into eight domains, including unusual data patterns, issues with baseline characteristics, lack of expected correlations, date violations, unusual patterns of allocation, internal and external inconsistencies, and plausibility of data.

The Tool may be applied by evidence synthesists, journal editors and other interested parties to determine whether an RCT should be considered sufficiently trustworthy to contribute to the evidence base that informs policy and practice.

The proposed lightning talk will provide a brief overview of the tool and its application.

Name(s): Eugenie Reich

Title: From Scientific Error To Scientific Fraud: How To Tell The Difference.

Abstract: The line between scientific error, misconduct and outright fraud can be defined by reference to the different mental states (or scienter in legal terms) that accompanies the act or omission of relevant scientific information or data. This talk will give the greatest hits of the factors that nonscientists, specifically prosecutors, courts, and defense lawyers for institutions motivated to self-investigate use to assess scienter even without full command of the science. The speaker is a attorney representing whistleblowers with experience cooperating with different types of scientific fraud enforcement.

Name(s): Paulina Stehlik, Caroline Dowsett, Ximena Camacho, Sharifa Nasreen, Nicole Pratt, Sallie-Anne Pearson, David Henry

Title: Conduct Of Real-World Studies Of Covid-19 Vaccine Effectiveness: Lessons For Open Science.

Abstract: BACKGROUND: Real-world studies of COVID-19 vaccine effectiveness (VE) were vital in informing policy. We summarised this literature to provide insights for future pandemics. Here we present findings relevant to open science. METHODS: Data: Johns Hopkins VIEW-hub database, a curation of COVID-19 VE studies from 13 databases, from inception to 10th Aug 2023. Inclusion: observational studies of COVID-19 VE on mortality. Exclusion: duplicate studies, those without reported methods. Data extraction: a single reviewer extracted data, a second checked accuracy. Discrepancies were discussed as a group with methodological and analytic experts. RESULTS: We included 85 studies. Initially, 23 were preprints; by July 2025 all except 4 preprints were published. Most (33, 57%) were publicly funded; 4 (5%) were funded by industry. Nine papers (10%) had a publicly available protocol or statistical plan, and 11 (13%) reported on protocol deviations; 77 (91%) gained, were exempt from or had pre-approved ethical approvals and 2 required participant consent; 38 (45%) did not report on missing data handling. CONCLUSIONS: This historical snapshot of real-world studies of COVID-19 VE on mortality provides lessons for open science. Industry funding was rare. Ethics review was common and participant consent rare, as is appropriate when using population data. We saw good use of preprints, while open protocols and reporting on missing data handling were infrequent. Open science practices should be embedded as part of 'business as usual' to enable open and transparent research in times of urgency.

14:00: Parallel Sessions

Lightning talks 4 - Contributors (SWHB401)

Chair: Alex Holcombe

Name(s): Keren Yu

Title: Uncovering Hidden Contributions In Scientific Paper Acknowledgements.

Abstract: Authorship is central to career advancement of academic researchers. Unfortunately, traditional authorship practices often exclude some contributors, such as technicians, data providers, and data analysts. The issue is not fully understood, however, in part due to lack of information regarding the types of contributions that often don't result in authorship, and their prevalence. As a step towards addressing this, our study analyses acknowledgment sections from hundreds of papers retrieved from the Dimensions database. The contributions described in each Acknowledgments section were manually extracted and we attempted to classify them using the 14 roles defined in the Contributor Roles Taxonomy (CRediT). Early findings (the study is still ongoing) reveal contribution types that frequently did not result in authorship include comments on manuscripts. A preliminary result is that most such contributions align with existing CRediT categories, suggesting the CRediT taxonomy captures a wide spectrum of roles.[a] By uncovering patterns in how contributors are acknowledged across disciplines, our research offers empirical insight to inform ongoing reform of scientific credit systems, supporting greater transparency, fairness, and recognition in academic publishing.

Name(s): Malgorzata Lagisz & April Robin Martining

Title: Leveling Up Contributorship: Using Dragon Kill Points To Track Contributions In Collaborative Research.

Abstract: Collaborative research projects often face challenges in fairly assigning, documenting, and recognizing individual contributions. Without transparent and equitable systems, these challenges can lead to conflict, distrust, and authorship disputes. Existing authorship conventions and project management tools often fall short-especially in large, diverse teams. To address these challenges, we propose an innovative solution adapted from multiplayer gaming: Dragon Kill Points (DKP). This flexible and scalable framework supports real-time tracking of contributions across the full project lifecycle. DKP is built on five key principles-Granularity, Responsibility, Equity, Autonomy, and Transparency (GREAT). o Granularity allows detailed, customizable tracking of diverse tasks. o Responsibility is maintained by setting clear authorship expectations from the outset. o Equity ensures that authorship policies apply fairly across the team. o Autonomy allows contributors to revisit their authorship position as the project evolves. o Transparency builds trust by making contribution records visible to all. This approach helps teams reduce authorship conflicts, improve inclusivity, and recognize the true value of middle authorship. DKP has been piloted in several meta-research and Open Science collaborations, showing promise for improving the fairness and transparency of contributorship tracking. Rather than replacing current authorship systems, DKP complements them by offering a structured, adaptable way to manage contributions in complex research environments.

Lightning talks 5 - Health Science (SWHB402)

Chair: Joanna Diong

Name(s): Ledetu Getinet Tiruneh, Nikitha Rajeev, Ade Oyekanmi, Joanne Lim, Adrian Barnett, Mark Jones, & Paulina Stehlik

Title: Study Designs And Analytic Techniques In Studies Most Read By Medical Doctors: A Cross-Sectional Analysis.

Abstract: BACKGROUND: Evidence-Based Practice (EBP) relies on a clinicians' ability to understand methods and interpret outputs from published papers to improve patient care - skills often underdeveloped among doctors. Understanding what types of studies are read by doctors can inform EBP curricula.

METHODS: We conducted a descriptive cross-sectional analysis of McMaster University's EvidenceAlerts and ACCESSSS services, evaluating monthly top 10 articles most read by doctors from Jul 2023 to Jun 2024. We extracted study features required during quality assessment and output interpretation: question type, study design, analytical techniques, numerical/graphical outputs .

RESULTS: Among 119 unique articles, most addressed interventional questions (n=104). Of 63 systematic reviews, common techniques included random and fixed-effects meta-analysis (55 and 20), and in 44 randomized trials, Cox regression (18) and Fisher's exact tests (13) were most prevalent. Analytic outputs featured relative risk (RR, 54), odds ratio (OR, 37), hazard ratio (HR, 35), and absolute risk difference (ARD, 35). Graphical outputs such as flow charts (102) and forest plots (90) were common among all study designs, with risk of bias summaries (42) and survival curves (24) common in SRs and RCTs respectively. Bayesian methods appeared in 16 studies.

CONCLUSION: Based on what papers doctors are reading, EBP curricula should emphasise knowledge of SRs and RCTs and interpretation of outputs like proportions, medians/means, RR/OR/HR/ADR, and forest plots. Awareness of Bayesian methods is also recommended.

Name(s): Gongkai Ye

Title: TRACE-RCT Study: Retrospective Descriptive Review Of Methodological Changes In Randomized Controlled Trials.

Abstract: The credibility of randomized controlled trials (RCTs) depends on methodological transparency. Publicly available protocols and statistical analysis plans (SAPs) can deter data-driven decisions, but documentation of changes is often inadequate. We retrospectively reviewed protocols, SAPs, and primary results publications of 100 global, registry listed, potentially practice-changing RCTs published in 2024 in six high-impact medical journals. Six methodological elements (primary outcome, eligibility criteria, sample size, analysis set, primary analysis method, and multi-arm comparisons) were assessed for substantive changes. Pre-publication changes were identified in 95 trials and at-publication changes were identified in 59 trials; the most frequent changes were in analysis method (59%) and sample size (61%), respectively. Most trials did not report whether changes to each methodological aspect were blinded to treatment allocation (66%-90%). Denominators may overlap between protocol and SAP sources. Six univariate regressions examined the association between methodological elements and statistical significance. Trials with changes to the primary analysis method had three times the odds of reporting statistically significant results (OR=3.04, 95% CI [1.07, 10.04], p=0.048), though this finding warrants cautious interpretation. Methodological changes were common, but blinding status was often unclear. To improve transparency, trialists should document whether changes were made blinded, and journals and registries should require access to original and final protocols and SAPs.

Name(s): Janice Graham

Title: Towards Planetary Health Governance: Restructuring Canadian Public Health In A Sea Of Inequity.

Abstract: What happens when powerful multinational technocrats, manufacturers and regulatory authorities align to collaborate in the assessment and implementation of emerging technologies? Not quite capture, not quite collusion, in the wake of agile regulatory relaxation and competitive interdependence with industry, shiny new products are being made available and accessible to governments and consumers fit to afford them. Safety and efficacy are but troublesome derivatives, the data for which are proprietarily secured and traded away for misdirected tropes of access, availability and equity. With the regulatory oars skimming a corporate sea of hegemonic opportunity, the rowboat is sinking, water is everywhere, and there is nary a drop to drink without a price tag. Data collected during four years of interviews, focus groups, deliberative engagements and fieldwork among diverse communities and public health policy elites support a reimagining of what it means and will take for public health and wellbeing to flourish in Canada. This lightning talk provides evidence, ideas and a framework to support the recentring of community and restructuring of public health in a federation of 40 million in ten provinces and 3 territories where a large part of the population feel removed from the critical decision-making affecting their essential needs, health and wellbeing.

Name(s): Kamila Navarro, Professor Barbara Mintzes, Dr Zhaoli Dai-Keller, Dr Martin

H'eroux, Dr Joanna Diong

Title: Responsible Reporting Practices Common In Spinal Cord Stimulation Research: A Scoping Review.

Abstract: Introduction: Responsible reporting practices for research rigour and transparency are not routinely applied in spinal cord stimulation research. We aimed to identify common responsible practices in reporting standards in spinal cord and other forms of neurostimulation to inform strategies that improve research rigour and transparency.

Methods: We developed a directed acyclic causal graph of strategies to improve responsible practices for research rigour and transparency. We conducted a scoping review of reporting standards in spinal cord and other forms of neurostimulation to inform causes of rigour and transparency, represented as nodes in the causal graph.

Results: Eleven reporting standards satisfied eligibility criteria and were included, and responsible reporting practices were extracted from these. Resolution of differences between reviewers was used to refine nodes in the causal graph: Reporting study design to minimise bias was refined as Reporting study, participant, and investigator characteristics; Reporting stimulation parameters was refined as Reporting stimulation configuration and parameters; and Reporting adverse events was added.

Conclusion: Strategies to improve research rigour and transparency require a more nuanced and responsible reporting of study, participant, and investigator characteristics; stimulation configuration and parameters; and adverse events.

Lightning talks 6 - Sports and Animals (SWHB411)

Chair: Kylie Hunter

Name(s): Ran Tian

Title: Statistical Practice In Sport And Exercise Science: A Meta-Research Study.

Abstract: Background: Growing concerns about statistical practices in sport and exercise science, combined with increasingly complex data structures and advanced analytical tools, highlight the need for rigorous statistical practice.

Aims: This study used a meta-research approach to examine statistical practices in sport and exercise science, focusing on 1) commonly used statistical techniques, and 2) their alignment with study design and data structure.

Methods: We searched MEDLINE and SPORTDiscus for sport and exercise science articles published between 2023 and 2024. From 28,464 records, we randomly selected 400 studies against our inclusion criteria. A total of 146 eligible studies were coded for study characteristics and design, statistical techniques, and sample size justifications. Results: Preliminary analysis of 30 studies found that the most used techniques were general statistical tests (43%) and multilevel models (43%). In 8 studies (27%), the statistical tests applied did not align with the underlying study design or data structure.

Conclusion: A misalignment between statistical techniques and data structures undermines the validity and reproducibility of results. Greater collaboration with statisticians and improved training in postgraduate degrees are essential to strengthen study design and enhance research impact in sport and exercise science.

OSF Registration: https://osf.io/8wp2x.

Name(s): Tomoya Sato

Title: What Kind Of Research Is Not Academic?: Characterizing The Essence Of Academic Research.

Abstract: The term "research" encompasses diverse and wide-ranging intellectual activities. Yet, the boundary between "academic research" and other forms of research has not been clearly define. While work in fields like physics or philosophy is typically regarded as academic, it is unclear whether studies on a particular novelist, analyses of chess strategies, or investigations into pasta recipes qualify as academic

without clarifying their essential differences. As research at universities grows more diverse, this distinction becomes crucial for accurate evaluation and for understanding the university's social role.

This presentation addresses the question: "What kind of research is not academic?" It proposes that the essence of academic research lies in revealing previously unknown aspects of the world, reality, and society, thereby delimiting and specifying their possibilities. Research on literature, chess, or pasta can yield new insights, but it often fails to meet the academic criterion of providing knowledge that determines what the world was/is/will be/should be. Through concrete examples, this presentation will illustrate the validity and significance of this classification and offer a new perspective on research. By clarifying this distinction, we can deepen our understanding of the legitimacy and value of university-based research.

Name(s): Natalie Anderson & R. Smith

Title: Are publishers sufficiently applying ethical standards for animal research articles?

Abstract: Ethical approval of research involving the use of animals is required in Australia by an Animal Ethics Committee (AEC). As such, ethical approval, alongside adherence to ARRIVE guidelines - a standard set of reporting criteria for research involving animals - is often cited as evidence of justification for the animal use and subsequent journal publication. Although journals and publishers often advise authors to comply with ARRIVE guidance and some publishers outline duties of authors regarding legislation for work involving animal use (e.g. Elsevier), enforcement is lacking and authors often exclude the ARRIVE Recommended Set, failing to demonstrate compliance with all relevant legislation and policies. For example, of the Recommended Set, "14. Ethical statement" requires authors to state clearly how the study conforms to appropriate regulations and guidelines. Further, COPE guidance advises adherence to the journal's ethical policies rather than solely relying on AEC approval. The application of ethical standards by publishers is imperative given the legal and ethical environment surrounding animal use in biomedical research is evolving, certain types of animal tests are prohibited in certain jurisdictions, and some animal research practices are highly contested; such as recreating violent acts.

15:00: Parallel Sessions

Discussion 1 (SWHB401)

Name(s): Elena Vicario

Title: Behind The Screens: Real Cases And Tools For Research Integrity.

Abstract: The scientific community is facing a trust crisis. Papermills, peer review manipulation, and authorship-for-sale schemes are part of a sophisticated global industry of orchestrated fraud against scientific publishing and have damaged trust in science through a rise in misinformation and public skepticism, especially in the fields of health and climate. On top of that, the lack of transparency around competing interests' particularly when corporate sponsors are involved' can distort the scientific record and undermine public health outcomes. This discussion will explore practical approaches to safeguarding research integrity at scale, including the use of AI-assisted screening, human-led audits, and early intervention models prior to peer review. Drawing on anonymized case studies, we will examine how integrity teams, such as the one at Frontiers, identify red flags and assess concerns related to image or data manipulation, authorship, and the influence of commercial determinants of health. Participants will be invited to engage with real examples of problematic submissions, reflect on how integrity concerns are handled in their own institutions, and discuss potential policy responses and infrastructure needs. The session will also explore the ethical and operational limits of automation and the role of transparent decision-making in high-volume publishing environments.

Discussion 2 (SWHB402)

Name(s): Barbara Mintzes,Brooke Nickel, Emma Gram, Tessa Copp, Jenna Smith, Jolyn Hersch, Kristen Pickles, & Kirsten McCaffery

Title: Commercial Use Of Feminist Empowerment Messages To Sell A Product

Abstract: Women's health has been chronically under-funded and under-researched, leading to large knowledge gaps. In the absence of evidence, interpretations of what is "normal" are often shaped by historical and cultural contexts, increasing the risk of medicalisation, overdiagnosis and overtreatment. Women's lived experiences often resonate with messages that their concerns are being overlooked. These messages are sometimes legitimate, with the aim of supporting improved equity; at other times, they are linked to strong and often hidden commercial motivations to sell specific tests and treatments. A key underlying concern is the misrepresentation of research evidence, both (i) on thresholds at which testing or treatment is more likely to be beneficial than harmful, and (ii) on outcomes of these interventions. The aim of this workshop is to: a) showcase our research on case studies in social and general media linked to commercially motivated feminist empowerment messages, including examples of fertility testing and menopause treatments; b) examine specifically how research evidence on the need for treatment and treatment outcomes has been represented within these case studies; c) discuss potential solutions, including the role of the media, better regulation and advocacy for evidence-based care.

Discussion 3 (SWHB411)

Name(s): Kate Organ

Title: A Research Integrity Lens On The Use Of Generative AI And Its Risks To Research.

Abstract: Generative AI is rapidly transforming how research is conducted, offering new efficiencies in writing, analysis, and data generation. Yet these advances also pose significant risks to research trustworthiness -challenging established norms around transparency, reproducibility, authorship, and accountability. This 60-minute panel will critically examine the implications of generative AI use for research integrity, focusing on how institutions and researchers can respond to emerging threats while harnessing the benefits of these technologies. Chaired by Professor Jennifer Byrne, the panel will feature Dr Shannon Taylor, Dr Tracy Olverson, Dr Georgia Teasdale-Twyford and Kate Organ. Drawing on real-world examples and institutional experience, the discussion will explore: * Risks of generative AI misuse across research * Challenges in detecting AI-generated content and synthetic data * Policy and infrastructure needs for responsible AI integration * Opportunities for improving research practices through AI Panellists will discuss real-world cases, emerging policy responses, and the ethical dilemmas faced by researchers, institutions, and publishers.

The session will also consider how research integrity frameworks must evolve to address these challenges, and what safeguards are needed to ensure that generative AI enhances rather than undermines the credibility of scientific knowledge.

16:00: Parallel Sessions

Workshop 1 (SWHB401)

Name(s): Eugenie Reich

Title: Inferences Of Intent In Scientific Fraud Investigation

Abstract: The line between scientific error, misconduct and outright fraud can be defined by reference to the different mental states (or scienter in legal terms) that accompanies the act or omission of relevant scientific information or data. This talk will discuss factors that nonscientists, specifically prosecutors, courts, and defense lawyers for institutions motivated to self-investigate (to the extent such exist), use to assess scienter even without full command of the science. After introducing historical underpinnings, there will be examples from recent cases to demonstrate how to draw inferences about intent fairly and in a way that can inform next investigative steps. The speaker is a attorney representing whistleblowers with experience cooperating with different types of scientific fraud enforcement.

Plastic Fantastic 2nd Edition https://www.amazon.com/Plastic-Fantastic-Biggest-Physics-Scientific/dp/B0F314LRF8

Langmuir's Talk on Pathological Science https://www.cs.princeton.edu/ ken/Langmuir/langmuir.htm

Workshop 2 (SWHB402)

Name(s): Amany Gouda-Vossos and Mark Maclean

Title: Maximising Research Outcomes With Secondary Use Of Health Data.

Abstract: Sharing clinical data for secondary research offers significant potential for accelerated discovery, quality of research, and promotes interdisciplinary collaboration. However, health data is inherently sensitive and therefore subject to rigorous controls for privacy, ethics, security, and location. Further, methodologies and skills to conduct secondary health research are not widespread, which limits the potential impact of such work.

To address these barriers, the Australian Research Data Commons (ARDC) is building national research infrastructure to enhance the discoverability, access, and reuse of health data through the Health Studies Australian National Data Asset program (HeSANDA).

The aims for this workshop are to showcase harmonised standards, and to demonstrate the processes, technology, and resources developed to mobilise health data for secondary use. We also invite multi-disciplinary input on how these approaches can be utilised, enhanced, and reused across diverse research domains.

We will also host a discussion with participants about the establishment of a community of practice for secondary use of highly protected data, focused on health data and enriched through inter-disciplinary collaborations.

Throughout this workshop participants will gain practical knowledge, resources, and a call to action to advance the safe and effective secondary use of health data.

Workshop 3 (SWHB411)

Name(s): Adrian Bauman & Mark Pettigrew

Title: Understanding Commercial Determinants Of Physical Activity: An Innovative Area Of Commercial Determinants.

Abstract: his workshop develops discussion on an innovative area of commercial determinants research and advocacy. Much has been written about the commercial determinants of tobacco, diet, alcohol use and gambling, but with limited mention of the commercial determinants of physical activity. This workshop has two parts. The co-presenters have developed an initial comprehensive typology, classification system and identified major themes in the physical activity area that are subject to commercial influences. These themes comprise: the creation of inactive societies, especially fossil fuels and the promotion of small screen time; the large-scale sponsorship of sport and physical activity; the fitness and wellness industries; direct private sector funding of physical activity programs; and commercial influences on researchers, physical activity science and evidence. These areas are mapped against major commercial determinants themes, including political practices, marketing, financial practices, influences on science, and reputational actions by the commercial sector. These exist within the complex intersectoral nature of physical activity, as it is not one product or service. The second part of the workshop will be to discuss and refine these themes with workshop participants and further interpret them using a 'commercial determinants' lens, as is required to progress this new area of research.

18:00: Plenary 2 (CPC Auditorium)

Chair: Jennifer Byrne

Name: Ivan Oranksy

Title: Retractions: On The Rise, But Not Enough

Abstract: Why we need more discussion of what happens when science goes wrong In 2000, there were about 40 retractions from the scholarly literature. In 2023, there were more than 10,000. That is a dramatic increase, even accounting for the growing number of papers published yearly. In this talk, I will explore the

reasons for the increase, why it is good news, and why the actual number should be even higher. I will tell the stories of the sleuths who are finding problems in the literature, drawing on 15 years of experience at Retraction Watch. And I will argue that while these issues may be difficult to talk about, particularly as academia and scientific research comes under attack, now is not the time to fade into the shrubbery.

Thursday 20 November

09:00: Mini-notes 2 - CDOH (main)

Chair: Lisa Parker

Name: Matthew Herder

Title: Widespread Non-Disclosure Of Expert Witness Roles In Canadian Pharmaceutical Litigation, 2019-2024.

Abstract: Context: Academics serving as expert witnesses in pharmaceutical litigation can earn tens to hundreds of thousands. While academic journals generally require disclosure of such financial relationships, compliance has not been empirically examined in Canada. Methods: We identified all expert witnesses named in relevant reported Canadian federal court judgments over a five-year period and cross-referenced names with journal articles published between three years prior to and after the reported court decision in which they appeared. The disclosures associated with each expert's publications were coded for: 1) relationships with the pharmaceutical company involved in litigation, 2) explicit disclosure of their expert witness role, and 3) compensation details. Results: A total of 166 unique expert witnesses appeared in reported federal court decisions in Canada between 2019-2024. Of these, 108 authored or co-authored one or more publications during the relevant timeframe. Only 32% (35 of 108) disclosed any relationship with a company involved in litigation, 11% (12 of 108) disclosed their role as an expert witness, and none disclosed compensation details. Conclusion: Although most academic publications require disclosure of expert witness roles, the majority of academics involved in recent Canadian pharmaceutical litigation did not comply, highlighting a gap between journal policies and observed practice.

Name: Karen Lee & Adrian Bauman

Title: Commercial Influences On Prevention Research.

Abstract: This abstract highlights commercial influences on prevention research, examining drivers of increasing publications across four prevention risk areas (tobacco, obesity, physical activity, alcohol). Bibliometric trends in publications were analysed using the WOS database across Period 1: 1980-1999; Period 2: 2000-2012 and Period 3: 2013 - 2023. Journals were coded into categories: publisher type (Scholarly societies, Commercial publishers); publishing distribution models (traditional; hybrid; open-access; open-access mega-journal) and years in publication (0-20 yrs, 21-49 yrs, >50 yrs). We found substantial publication increases, 16-fold and 23-fold increases for obesity and PA publications from P1 to P3. Three-fold and four-fold increases were observed for alcohol and tobacco publications in the same period. There was a significant increase in commercial publishers compared to scholarly societies publishers across all risk areas and this increase was significantly greater in the areas of PA and Obesity. The increase in 'newer' journals were found to be significantly more prevalent in the areas of PA and Obesity as well when compared to tobacco and alcohol Overall, dramatic increases particularly in PA and obesity publications are likely driven by 'new' high-volume commercial publishers. Recently established commercial mega-journal publishers appear to be targeting newer areas of prevention research (PA, Obesity). As a result, the field is saturated with publications of variable quality, less rigorous peer-review processes and high acceptance rates.

Name: Akemi Hara & Akihiko

Title: Scale, Strategy, And Secrecy: Unpacking Medical Device Industry Payments In Japan

Abstract: Financial relationships between industry and medicine demand scrutiny, yet Japan's influential medical device sector has remained a black box. Our research pierces this opacity through two complementary investigations, revealing a landscape of substantial financial influence governed by engineered secrecy.

First, we conducted the most comprehensive analysis to date of Japan's medical device industry payments, quantifying $947.1 million in financial ties to healthcare professionals and organizations from 2019-2022. This foundational study also exposed the systemic failings of the industry's self-regulatory transparency model: a decentralized system of non-standardized, unsearchable PDF files that makes public oversight practically impossible.

Second, we investigated the strategic dimension of these payments by focusing on a powerful and influential group: the leadership of Japan's 18 major medical associations. Our analysis revealed that 93.5% of these leaders received payments, with a distinct pattern showing that medical device companies disproportionately target leaders in surgical specialties. This suggests a deliberate strategy to influence key opinion leaders in fields where device selection is paramount.

Together, these findings paint a stark picture: a secretive, multi-million-dollar financial ecosystem that strategically targets medical leaders while simultaneously obstructing public accountability. This work underscores the urgent need for a legally mandated, centralized, and open disclosure system to mitigate conflicts of interest and safeguard patient trust.

10:30: Parallel Sessions

Discussion 4 (main)

Name: Pranujan Pathmendra, Adrian Barnett, Jennifer Byrne

Title: What Does Ideal Education In Publication Integrity Look Like?

Abstract: The literature provides the foundation for researchers and scholars to develop their work and contribute to knowledge. Concerns arise when parts of the literature are unreliable or irreproducible, as this could mislead scholars and researchers, leading to a waste of resources and time. In response, education is a key approach that many institutions have adopted to both foster a culture of truth and transparency, as well as to help researchers, particularly students and early career researchers (ECRs), build their skills in critical reading and evaluating the literature. However, concerns have been raised about whether existing publication integrity education could be superficial or whether researchers engage with such education in a tokenistic manner as a means of career progression rather than learning valuable skills. In this discussion group, we will present some exploratory insights about education in publication integrity, based on the results of a qualitative online survey of postgraduate research students and ECRs. The group will then discuss existing education on publication integrity within their disciplines, suggest approaches for ideal forms of education and whether AI could be leveraged to create more dialogue-based education for students. In doing so, we hope to brainstorm insights towards creating effective education on publication integrity that can assist researchers and scholars to navigate the literature more confidently.

Discussion 5 (SWHB401)

Name: Wendy Higgins

Title: Measurement Critic's Challenge

Abstract: Studies show that researchers often take the validity of measurements for granted. This is a serious problem because poorly validated measurements mean weak scientific inferences. Let's do something about it. Think of a measure you like and one you don't, grab a measurement critic's hat (I have spares), and join the Measurement Critic's Challenge!

What is the Measurement Critic's Challenge? It's a new measurement stress test where researchers actively search for threats to a measure's validity potential, that is, its capacity to produce valid measurements. The more stress tests a measure passes, the more confident we can be in its output. If a measure falls short, we can improve or replace it.

Threats to validity include confounding factors, ambiguous wording, weak psychometric properties, and more. In this session, we'll focus on spotting obvious confounds and serious conceptual flaws in your chosen

measures. This is a low-bar stress test, yet I suspect a troubling number of measures would fail it. See how your favourite measure stacks up in the inaugural Measurement Critic's Challenge.

Discussion 6 (SWHB402)

Name: Mark Petticrew

Title: Evidence, Evidence-Based Policymaking, And The Commercial Determinants Of Health

Abstract: One of the key strategies of commercial actors is to influence and distort the evidence base relating to the harms of their products. This is done through funding misleading industry-friendly science; it is also done through the promotion of misinformation to the public, policymakers and other decisionmakers. One part of this strategy is the promotion of uncertainty - including the promotion of mistrust about evidence, scientific and other experts, causality, and science in general. While this strategy is part of the CDOH 'playbook' used by industries such as the tobacco, alcohol, gambling, food and other industries, it is increasingly also used by political actors.

This strategy can be difficult to combat because good scientific practice, including the critical appraisal of evidence to identify biases and uncertainties, is a cornerstone of evidence-based science. These legitimate scientific practices (e.g., as part of systematic reviews) are weaponised by commercial actors to undermine public health, and to dispute evidence of harm.

This workshop will start with a short presentation to set out the problem, and will then involve structured discussion about (i) the nature of the problem (ii) the commercial and other actors involved in such practices; and (iii) possible solutions to help protect science.

Discussion 7 (SWHB411)

Name: Jon Jureidini, Leemon McHenry & George (Skip) Murgatroyd

Title: Addressing Journal Editors' Failure To Retract Fraudulent And Misleading Publications

Abstract: Initiatives such as RIAT (Restoring Incomplete and Abandoned Trials) and Retraction Watch (https://retractionwatch.com) have had an important but limited effect in correcting the scientific literature. The aim of this discussion is to develop ideas about how to better ensure journal editors retract or correct misleading papers.

A brief case study will be a primer for the discussion: the 2001 report (ghost managed for Keller et al by SmithKline Beecham) in the Journal of the American Academy of Child and Adolescent Psychiatry (JAACAP) of the infamous Study 329 of paroxetine for adolescent depression. In the 20 years since it was established that the paper's claims for efficacy and safety were false, there have been many failed attempts to correct the public record, including: multiple published critiques; representations to successive editors-in-chief of JAACAP and to individual authors; complaints to the universities of senior named authors; and a RIAT reanalysis, all without success. Now one of us is taking legal action against JAACAP.

Participants are encouraged to bring their own experiences with successful or unsuccessful attempts to correct the scientific record; and to present and develop ideas for change.

11:30: Parallel Sessions

Hackathon 1 (main)

Name: Barbara Mintzes (moderator), Lisa Bero, Lisa Parker, James Larkin, Katherine Cullerton, Akihiko Ozaki, Cinzia Colombo, Anthony Brown, Adam Dunn, Jason Chin, Kellia Chiu, Joanna Diong, Belinda Townsend, Matthew Herder, & Janice Graham

Title: How Can We Better Manage Conflicts Of Interest?

Abstract: A conflict of interest is defined as a risk that professional judgement or actions regarding a primary interest will be unduly influenced by a secondary interest, such as financial gain (Institute of Medicine 2009).

Pharmaceutical and medical device industry funding of researchers, professional and consumer health organisations, clinical guideline developers, and individual clinicians is widespread. These funding relationships create conflicts of interest because of a clash between primary interests in clinical care, patient representation and public health, and funders need for profitability. Industry funding has been shown to bias research outcomes, clinical guideline recommendations, patient advocacy, and diagnostic and prescribing decisions. Better strategies are needed to improve understanding and management.

This hackathon unites researchers from Australia, Canada, Ireland, Italy, Japan, and the USA who have examined conflicts of interest, and across sectors (health consumers, general practice, nutrition, clinical guidelines, health informatics, regulatory science) who have developed initiatives to combat undue influence.

The session begins with brief panel presentations on three initiatives: i) WHO and NHMRC conflict of interest criteria for clinical guideline developers, ii) a toolkit for food/nutrition researchers, and iii) a professional society who stopped accepting pharmaceutical industry funding. Presentations will be followed by audience and panel discussion to identify key themes and strategies.

Discussion 8 (SWHB401)

Name: Beth Clarke; co-presenters: Jamie Cummins & Malte Elson (they will not be attending in person)

Title: Help Us Improve Regcheck: An Llm Tool That Compares Preregistrations To Manuscripts

Abstract: Our research group is developing RegCheck (regcheck.app), a tool designed to help authors and reviewers identify deviations from preregistrations in manuscripts. The tool leverages large language models to extract relevant information (e.g., hypotheses, sample size, analysis plan) and compares whether this information is consistent across the preregistration and manuscript. While RegCheck can never replace humans entirely, our hope is that this tool will make it easier for authors and reviewers to check whether all deviations from preregistrations have been disclosed.

We would love to hear your thoughts on how RegCheck can be most helpful to you. This includes things like: thoughts on the current interface, desired features, and any other thoughts or concerns that we should consider as we work to validate RegCheck. Although RegCheck has been developed with psychologists in mind, we are also keen to discuss how it might be useful in other fields.

Workshop 5 (SWHB402)

Name: Matt McCoy

Title: Image Integrity In Research: Detecting Manipulation And Embedding Trustworthy Practices

Abstract: Image manipulation and duplication are among the most common causes of research retractions, yet figure checking is not widely adopted compared to text plagiarism detection. This workshop will explore how undetected image problems threaten research trustworthiness, distort evidence, and have been documented in areas where commercial determinants of health exert influence.

The session aims to build both practical skills and strategic awareness. Participants will examine real-world case studies of image integrity breaches and identify common manipulation patterns such as duplication, splicing, and inappropriate adjustments. The workshop will explore the range of accessible detection tools, ranging from open-source scripts to professional platforms currently trialled by publishers and institutions.

Beyond detection, the workshop will focus on embedding image integrity into everyday research and publication practice. In small groups, participants will design draft workflows and policies for journals, funders, and institutions, considering feasibility, alignment with open science, and equitable access.

By the end of the session, participants will have both technical methods and actionable models to strengthen image integrity within their own research communities.

Workshop 6 (SWHB411)

Name: Mark Ziemann

Title: Achieving Complete Computational Research Reproducibility Using Containers.

Abstract: Empirical research shows that genomics and bioinformatics is in a reproducibility crisis, and it is likely the case in other fields too. While it is becoming more common to provide data and code to support publications, these alone cannot guarantee reproducibility. The computing environment and software dependencies are critical ingredients [1]. In bioinformatics, a typical study may require dozens of software packages including standalone programs and packages for languages like R and python. Containerising the compute environment allows full reproducibility, but it requires some technical expertise. In this workshop, I will demonstrate how researchers can encapsulate their computational environments in a Docker container image and how this can be archived for long term preservation. If there is sufficient time, I will also demonstrate how these containers can be deployed on shared high-performance computing systems where Docker is not allowed, using the Apptainer container framework.

[1] Ziemann M, Poulain P, Bora A. The five pillars of computational reproducibility: bioinformatics and beyond. Brief Bioinform. 2023 Sep 22;24(6):bbad375. doi: 10.1093/bib/bbad375.

13:30: Mini-notes 3 - Integrity (main)

Chair: Jason Chin

Name: James Heathers

Title: The Evolving Field Of Forensic Metascience.

Abstract: 'Forensic metascience' involves using digital tools, statistical observations or human faculties to assess the consistency of empirical features within scientific statements - essentially, it performs error detection. Starting out of necessity ten years ago, this talk reviews progress in the field, and what the immediate future holds. Specific examples of error detection within medicine will be discussed, with practical examples for researchers looking to detect errors in their own sub-fields.

Name: Annie Whamond

Title: Analysing Discussion Text And References Of Paper Mill Articles In High-Impact Factor Cancer Journals.

Abstract: Identifying potential paper mill articles by visually scanning article text could help readers avoid them. We conducted an exploratory, cross-sectional, descriptive analysis of discussion text and references in high-impact factor (IF) cancer journals, defined as IFo/ooyen7 in Clarivate categories 'oncology', 'biochemistry & molecular biology', or 'cell biology'. We filtered the Retraction Watch database for retraction reason "paper mill", subject "cancer", and journals on our high-IF list. For comparison article cohorts, we randomly sampled original cancer articles in (i) the same n=8 journals as retracted articles, and (ii) n=10 independent journals with high-IF maintained o/ooyen20 years. We found 22 retracted paper mill articles, published between 2016 and 2022. Both comparison groups (n=100 articles each) were restricted to articles published between 2016 and 2024. For each article, we calculated percentage of references first cited in each section. We then classified every discussion sentence as 'background', 'summary', 'comparison', 'inference', 'limitation', or 'future direction', and recorded whether sentences cited new references. Background sentences citing new references were most frequent in paper mill articles (median 32%, IQR 20-40%), compared to same journal articles (18%, IQR 11-25%) and independent journals (11%, IQR 8-17%). Recognising superficial and redundant "second introductions" in discussion sections could help readers quickly identify potentially problematic articles.

Name: Luciana Machado

Title: A New Global Alliance Tackling Research Integrity Challenges

Abstract: Contemporary science faces an integrity crisis marked by reproducibility failures, predatory publishing, paper mills, and artificial intelligence misuse. Institutional responses remain fragmented across

compliance offices and disciplinary boundaries, creating coordination gaps that limit progress and erode public trust.

This lightning talk will present a new network model that addresses these coordination gaps through collaborative, cross-disciplinary action. The Science Integrity Alliance (SIA) was founded to address these challenges through a coordinated network that transcends silos. Unlike traditional efforts that compete for scarce resources, SIA complements existing initiatives. It integrates work across scholarly infrastructure, scientific communication, research education, reproducibility enhancement, and open science advancement, amplifying impact no single actor could achieve alone.

SIA provides a comprehensive ecosystem: a digital magazine, platforms mapping research integrity and open science efforts, educational hubs, community forums, and catalogues of solutions. These adaptive frameworks evolve continuously in response to community needs.

Within 18 months, SIA has partnered with 17 organizations and engaged 20+ contributors across 15 countries, demonstrating momentum toward change. By connecting stakeholders, disseminating best practices, and co-developing solutions, SIA works to reshape research culture, advancing a future where integrity is the foundation of global science.

14:30: Parallel Sessions

Lightning talks 7 - Transparency (SWHB401)

Chair: Joanna Diong

Name: Tatiana Chakravorti

Title: Open Science In Hci Research.

Abstract: Many fields of science, including Human-Computer Interaction (HCI), have heightened introspection in the wake of concerns around reproducibility and replicability of published findings. Notably, in recent years, the HCI community has worked to implement policy changes and mainstream open science practices. Our work investigates early-career HCI researchers' perceptions of open science and engagement with best practices through 18 semi-structured interviews. All these researchers used mixed methods and qualitative methodology for their research. Our findings highlight both opportunities and challenges in the adoption of open science practices within HCI. While participants described key barriers such as a lack of clear incentives, cultural resistance, and concerns about intellectual property, they also identified positive trends, including increasing awareness of open science practices, evolving norms around peer review, and perceived benefits such as enhanced visibility, transparency, diversity, accessibility, collaboration, and research credibility. We observe that small changes at major conferences like the Conference on Human Factors in Computing Systems (CHI) and Computer-Supported Cooperative Work (CSCW) could meaningfully impact community norms. We offer recommendations to address these barriers and to promote transparency and openness in HCI. While these findings provide valuable and interesting insights about the open science practices by early-career HCI researchers, their applicability is limited to the USA only.

Name: Olmo van den Akker

Title: Simulating The Effects Of P-Hacking: A Systematic Review

Abstract: In this study, we systematically review the results from studies that simulated p-hacking. The idea behind the systematic review is to draw conclusions about the relative 'effectiveness' of p-hacking practices in creating a biased scientific literature. This bias is manifested through false positive results and inflated effect sizes and is empirically corroborated through many studies showing a lack of replicability in a wide range of fields. We use OpenAlex to search for relevant papers and code them using a preregistererd coding protocol focused on the different types of p-hacking and their impact on false positive rates, effect sizes, and statistical power. To put the different p-hacking strategies into context, we also document the specific designs of the simulations, such as the different conditions and the number of iterations used in a condition. The search for papers yielded 2,387 hits, which are currently being assessed for relevance and

coded. The results from the analysis will be in at the time of the conference given that data extraction will take place in September 2025, and data synthesis in October 2025.

Name: Lee Jones, Adrian Barnett, & Dimitrios Vagenas

Title: An Empirical Study Of Computational Reproducibility.

Abstract: Reproducibility in health research remains a concern, with many published results failing to be independently reproduced. Computational reproducibility requires that shared data and methods, when reanalysed, produce the same results as those reported in the published paper. We examined 100 randomly selected papers from PLOS ONE that used linear regression. Seventy claimed data availability, yet up to a third of these papers lacked the raw data required to reproduce analyses. A sub-sample of papers was tested for computational reproducibility, which was assessed by comparing reported and reanalysed results, using thresholds for absolute differences and rounding errors aligned with the reported decimal places. Only half of the papers reproduced successfully. Key barriers included mismatched variable names, incomplete reporting of model specifications, and unclear data exclusions. Our findings show that even when data are shared, computational reproducibility is far from guaranteed. Stronger standards for data dictionaries, analysis code, and model documentation are needed to support open, verifiable science.

Name: Karl Huang

Title: Beyond Traditional Metrics: Leveraging Open Data Integration For Equitable Research

Abstract: The rapid development of open data sources for indexing research outputs is fundamentally transforming research evaluation practices. Recent milestones, including the release of the Leiden Ranking Open Edition and Australia's new Research Insights Capability (RIC) framework from the Australian Research Council, demonstrate a decisive shift toward open data sources and persistent identifiers in research assessment. The ability to link and integrate diverse open data sources creates unprecedented coverage and opens new possibilities for research evaluation. This presentation highlights work by the Curtin Open Knowledge Initiative that leverages these advances to address real-world challenges in research assessment. Our approach demonstrates how comprehensive open data integration can provide new perspectives on research impact measurement beyond traditional metrics. Critically, these developments enable us to ask more fundamental questions about knowledge accessibility and participation in knowledge creation. By examining who gets to access research outputs and who participates in knowledge generation, we can develop more equitable and comprehensive approaches to understanding research impact and value.

Lightning talks 8 - Efficiency and Errors (SWHB402)

Chair: Gina Grimshaw

Name: Madeleen van der Merwe

Title: Statistical Errors In Health Journal Articles. A Systematic Review

Abstract: Background Statistical errors can lead to misleading outcomes, harm patients, and erode trust in research. This review categorises and quantifies such errors in health studies. Methods We included studies analysing statistical errors in health journal articles. Three databases were searched, screened by three authors. One author extracted data, another checked it. Generalisability was assessed using a modified RoB-PrevMV tool. Results From 3,421 articles, 53 were included: 38 on various errors and 15 on specific ones. The first group listed 442 Data Analysis errors, and the second 31, based on Mansournia's CHAMP Statement. Thirty-five statistical errors were cited in four or more articles, and eight errors were reported by at least 10 studies. "General incorrect statistical analysis" is reported most frequently (40 times), with prevalence ranging from 7%-96%, with median 22%. Of errors reported in >10 articles, "Failure to state the number of tails" has the highest median (67%, range 5-98%), and "Reporting paired vs independent tests" has the lowest (8%, range 0-58%). Conclusion Statistical errors are highly prevalent in the health research literature and are highly heterogeneous across the included studies. There is a continued need for improvements in research methodology, education, and editorial oversight.

Name: Gerben ter Riet & Anne de Jong

Title: Four-Year Trends Of Adherence To A Checklist For Responsible Research Practices.

Abstract: Objective - To estimate the 4-year adherence trend of our institute's researchers with a 14-item checklist for responsible conduct of research. Methods - We adhered to the 14 items ourselves. We drew a random sample of 24 projects, stratified by department (n=6) and year (n=4) from a database and used desk research and interviews. Adherence was scored as yes, partial, no or not applicable. Analysis of 22 projects was by (ordinal) logistic regression. Findings - The 2 most and the 2 least adhering departments scored 81% and 60% of items, respectively. The overall trend in the probability of adherence was negative (odds ratio 0.94 (95%CI 0.88 to 1.01). Seven items had stable high adherence, three medium and decreasing adherence, two high but decreasing adherence, one low but increasing adherence. Awareness and findability of the checklist were suboptimal and its application to qualitative projects was doubted by some researchers. Limitations - There was under- and oversampling of 2020 and 2023, respectively. The unit of analysis was sometimes unclear if projects had >1 large work packages. Assignment of scores involved subjectivity. Conclusions - Overall levels of adherence varied between departments. Of seven items stably adhered to well, six were connected to policies imposed by funders, law or the research institute. Five items with decreasing trends were open science-related items (e.g. preregistering study protocols).

Name: Inika Sharma

Title: The Landscape Of Randomised Controlled Trials In India: A Mapping Review.

Abstract: We aimed to systematically map Indian Randomised controlled trials (RCTs) to understand the existing research landscape, inform science reform policies and research prioritisation. We used standard evidence synthesis methods to identify RCTs conducted in India from 2000 to 2019. We retrieved 119,322 records, of which 10,672 completed RCTs met the eligibility criteria. We found a gradual increase in the number of RCTs over time, although there were notable declines in 2006, 2008, 2016, and 2018. Chandigarh reported the highest rate of RCTs conducted per 100,000 population with 54.61 , followed by Puducherry (18.88), and Delhi 9.60. In contrast, the national median is just 0.53 per 100,000. Most published trials focused on non-communicable diseases , particularly the digestive system (1589, 14.9%), endocrine, nutritional, or metabolic system (721, 6.8%) and infectious or parasitic diseases (533, 5.0%). The most evaluated interventions comprised pharmaceuticals (5893, 55.2%), followed by surgical interventions (1183, 11.1%), and alternative medicine (824, 7.7%). Predominantly, physiological or clinical outcomes were reported as primary outcomes . There was a moderately strong correlation between the number of trials and disease burden (0.7), and between the number of trials and DALY (0.6). This mapping review identifies gaps in representing certain diseases in RCTs and a lack of conduct of prevention trials. Addressing these gaps will help improve evidence-based policy and develop a robust clinical trial ecosystem for decision-making on the conduct of future trials.

Name: Jacques Raubenheimer

Title: You Get What You Pay For & Value What You Work (Hard) For-Avoiding The Pitfalls Of Bad Google Trends Research.

Abstract: Introduction: Google has provided free public access to Google Trends (GT) data for 15 years. Since the first seminal Google Flu Trends paper, studies using Google Trends have grown exponentially, especially in medical research. Many researchers, tempted by the offer of free, easily accessible data, tend to view this as a quick & easy way to get publications out, but these publications are often very poor quality due to misunderstandings about the nature of the data and poor methodological choices. Aim 1: Illustrate ways in which poor quality research is being produced with Google Trends data, in the hope of stemming the flow of such publications. Aim 2: Suggest meaningful uses of the data (although these require a little more effort). This presentation details, with examples from published studies, several aspects of poor methodology including: -Continued use of GT website data instead of GT API data -No multiple sampling -Poor understanding of the nature of the data as -time series data -probabilities -normalised by time and region -Inadequate grasp of the literature -Poor visualisation -Inappropriate statistical tests -Lack of controls for alternate causes (especially media) -Confirmation bias due to a tenacious belief in the infodemiology promise I will conclude with demonstrations of methods and research topics which can produce rigorous results from GT, with tools created and posted on GitHub, including: -Multiple sampling tool -Co-searched terms and

topics -Election/referendum prediction -Seasonal patterns robust to media influence -Media influence as the target

Lightning talks 9 - Ethics and Diversity (SWHB411)

Chair: Fallon Mody

Name: Danjuma Saidu

Title: Decolonising Integrity: Whose Standards Define 'Good' Research?

Abstract: What counts as "rigorous," "ethical," or "trustworthy" research is often shaped by dominant academic paradigms rooted in Euro-American epistemologies. As meta-research and open science grow in influence, it is critical to ask: whose values and assumptions are embedded in the standards we uphold? This discussion group aims to interrogate the colonial legacies and power structures that underpin current research integrity frameworks, and explore what it means to decolonise them.

Participants will reflect on how concepts like transparency, reproducibility, and bias may be differently understood in diverse cultural and geopolitical contexts. We will also examine how current models of research evaluation and publishing may inadvertently marginalize knowledge systems from the Global South.

The session will be highly participatory, beginning with short provocations to spark discussion, followed by small group dialogues and collective brainstorming. Participants will be encouraged to share experiences from their own disciplines and regions, with the goal of surfacing practical steps toward more inclusive and context-sensitive standards of research integrity. Together, we will explore how open science and meta-research can evolve to support not just better science, but fairer science.

Name: Cooper Smout, Anna Finnane, Matthew Ruby, Aidan Tan, Ginny Barbour, & Adrian Barnett

Title: Metavaluation In Practice: Valuing Diverse Contributions To Aimos 2025

Abstract: This talk explores Metavaluation, a participatory framework for recognising and rewarding the full range of scholarly contributions. At its core is a simple but powerful protocol: self-referential pairwise comparisons that allow communities to value ideas, actions, and resources in standardised, interoperable units-enabling coordination around shared values and goals.

Building on our AIMOS 2023 prototype, where we used Metavaluation to evaluate conference contributions, this session introduces Wisdom-a new app that makes the framework accessible to any community. Participants will join a live experiment using Wisdom to record, review, and recognise real contributions to AIMOS 2025-whether they be talks, organising work, mentorship, or behind-the-scenes support.

Together, we'll co-create a collective value map of AIMOS 2025 and demonstrate how this system could organise future events-from proposal selection to post-conference recognition and reward.

Name: Reneepearl Kim P. Sales, Lynnell Alexie D. Ong, & Soumyadeep Bhaumik

Title: Ethics Meta-Research In Health Research Priority-Setting: A Review Of Philippine Cases.

Abstract: We aimed to evaluate how health research priority-setting (RPS) in the Philippines reflects principles of meta-research and open science.

Ethics-focused meta-research is rare, especially in low- and middle-income countries. We reviewed seven RPS exercises conducted between 2016 and 2024, including national (NUHRA 2017-2022; 2023-2028), sectoral (health systems; nutrition), institutional (Virology Institute of the Philippines), and network-level agendas (Philippine Liver Research Network). Using WHO ethics guidance and the REPRISE reporting framework, we assessed fairness, social value, special obligations, harm assessment, and proportionality.

Our findings show progress in transparency, stakeholder diversity, and clearer criteria in newer exercises. Yet open-science practices were inconsistently applied: full protocols, criteria, and deliberations were seldom made public, and REPRISE was not systematically adopted. Safeguards against commercial influence were limited, with little disclosure or management of conflicts of interest despite industry participation.

Proportionality between scope, resources, and timelines also varied, constraining equity integration and documentation in some cases.

Practical improvements are feasible: routine COI disclosure, explicit integration of equity, proportional budgeting, and systematic adoption of REPRISE. By embedding open, auditable practices in RPS, research systems can strengthen legitimacy, mitigate commercial determinants, and align research investments with public health and equity goals.

15:30: Parallel Sessions

Discussion 9 (SWHB401)

Name: Adrian Barnett, Jennifer Byrne, Jason Chin, & Alex Holcombe

Title: Aimos And Metaror: Moving Forward After Our Metascience Platform'S First Year

Abstract: MetaROR is a new platform for meta-research that coordinates peer review for preprints in meta-research using the publish-review-curate model (https://metaror.org/). It is supported by AIMOS and RoRI and was launched the 2024 AIMOS conference. The Australian members of the MetaROR editorial team will give an update on the first year, which has seen a healthy number of articles and eight partnerships with journals including PLOS Biology. We will also discuss plans for improvement and financial sustainability.

We are keen to hear the views of meta-researchers. Have you submitted to MetaROR? Do you have any concerns about MetaROR? What should we keep and what should we change? Are there experiments we could run? How could MetaROR further support early-career researchers and scholars, and promote diversity and inclusion within our community? We aim to have a lively and open discussion about current activities and the future of MetaROR.

Discussion 10 (SWHB402)

Name: Ger Post

Title: The Types Of Decisions Research Evaluators Make

Abstract: To improve judgments of research quality, it is essential to understand the cognitive processes behind such decisions. How do editors make decisions about whether to reject a manuscript? How does a meta-analyst decide whether a study meets a quality threshold for inclusion? How does a policy maker decide whether the evidence in a paper is reliable to act on? In each case, one must make sense of a situation, generate options, evaluate them, and ultimately select a course of action.

We will review various decision types, such as snap, simulation, rule, metaphor, analogy, story, pros and cons, and meta, and discuss the research evaluation contexts where each may be most useful as well as the challenges they may present. Ultimately, the aim is to examine the suitability of different decision types across diverse research evaluation contexts, assess their strengths and limitations, and to explore whether these insights could inform the development of a meta-decision guide for research evaluation.

Discussion 11 (SWHB411)

Name: Vincent Mourik

Title: Mitigating Risks For Early Career Researchers That Blow The Whistle On Unreliable Research

Abstract: Unreliable research is often best spotted by those that are closest to it: the people working in the lab, those doing the technical work. Typically, these are non-tenured researchers in the first decade of their career. Speaking up, or having to blow the whistle, is particularly risky in this phase of the career. Retaliation by those implicated can take many forms. Others more distant might fear or misunderstand the person and let this cloud their judgement of the person and/or their work. Topics I would like to have a discussion on are: * best whistleblowing practices' * overview of risks and their impact, * how and where to seek support, * implementing mitigation strategies such as how to convincingly embed a whistleblowing event into one' * career narrative.

I would seek a bullet point style few pager aimed at whistleblowing ECRs as an output, to help them forward early on in the process, and view a round table discussion with a few interested others as a good starting point for that.

Disclaimer: I blew the whistle myself on a case of unreliable research in quantum physics/computing involving Delft University of Technology, University of Copenhagen and Microsoft. My proposal is grounded in my own experience.

16:30: Parallel Sessions

Hackathon 2 (SWHB401)

Name: Ginny Barbour Janet Catterall

Title: Hacking The System: Improving Research Assessment By Stealth

Abstract: The aims of this session are to:

1. Ensure participants are familiar with key principles of responsible research assessment
2. Understand the link between responsible research assessment, open science and research quality
3. Take away 2-3 concrete actions that participants can use to " "hack" " research assessment at their institution

Many researchers are keen to see improvements in research assessment in order for it to support open and reproducible research. However, it is often the case that researchers don' "A^ot know where to start with change at their institution, and may feel relatively powerless in doing so.

Using the new guide from DORA - A Practical Guide to Implementing Responsible Research Assessment at Research Performing Organizations (https://sfdora.org/resource/practical-guide/) we will outline key starting points and tools for effecting change. Through group discussions, we will collaboratively develop a set of simple ways that individuals - especially early and mid-career researchers (who are often poorly represented in policy discussions) - can take back to their institutions, and via their own local networks and peer groups help initiate and catalyse responsible research assessment ' especially as it relates to open science and research quality.

Discussion 12 (SWHB402)

Name: Kyle Morrison

Title: Designing A Framework For Reporting Guidance In Environmental Evidence Synthesis

Abstract: This discussion group will explore how to develop tailored reporting guidance for environmental sciences by combining the strengths of established frameworks with a modular, extensible architecture. PRISMA, designed primarily for health research, has demonstrated how field-specific extensions can improve transparency and usability across diverse evidence types. In environmental sciences, ROSES (RepOrting standards for Systematic Evidence Syntheses) has provided a domain-appropriate alternative, yet rapid methodological innovation (e.g., for evidence mapping, bibliometrics and meta-analysis) now demands clearer, more flexible guidance. We are undertaking a ROSES update and propose an extension framework that is modular: core items define reporting standards for systematic revies and maps, whole optional modules can be added for specific additional methodologies (e.g., meta-analyses and bibliometrics) or for specific subdisciplines (e.g., synthesis of ecotoxicological experiments or synthesis of epidemiological studies). This session will focus on two main pragmatic questions: 1) What should a modular framework look like in practice 2) What modules are required within environmental sciences (e.g., bibliometrics, meta-analyses).

Our goal is to refine design principles and produce a blueprint to guide extension development for the ROSES update. All participants in the discussion will be offered to contribute further to help develop a ROSES update and module framework.

Discussion 13 (SWHB411)

Name: Soumyadeep Bhaumik & Reneepearl Kim P. Sales

Title: Why Do Funders Not Fund Meta-Research In Health And Medicine?

Abstract: Background Meta-research is essential for improving scientific quality and public trust. Yet in health and medicine, it remains significantly underfunded. This limits the ability of researchers to critically examine and improve the knowledge ecosystem. Understanding the structural, epistemic, and political reasons behind this underinvestment is crucial. Aim We will explore, "Why don't funders fund meta-research in health and medicine?" Our goal is to identify key barriers, opportunities and strategies to enhance the visibility and legitimacy of meta-research in health funding landscapes. Structure & Engagement This discussion group is open to all AIMOS participants, especially researchers, funders, and policy actors. In the first half of the session, we will use an open fishbowl format to foster inclusive and dynamic dialogue. A small group of participants (the workshop organisers) will begin the discussion in an inner circle, while others sit around them in an outer circle. Anyone from the outer circle can join the inner circle at any time by replacing a current speaker. In the second half, participants will co-create a visual map of the discussion using chart paper and post it notes. Output Participants will be invited to join a co-authored white paper on the topic.

Friday 21 November

08:30: Parallel Sessions

Workshop 6 (SWHB401)

Name: Annie Whamond

Title: Retrieving Scholarly Metadata With R: Introduction To Crossref And Openalex Apis

Abstract: Application Programming Interfaces (APIs) are useful tools that allow users to retrieve large batches of metadata with relative ease. Accessing these programmatically, rather than through a web browser interface, enhances research reproducibility and replicability. This introductory workshop focuses on two major databases for scholarly publishing, Crossref and OpenAlex, that have APIs accessible via R packages without paywall barriers. Participants will be guided through how to:

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* Use these APIs responsibly

* Retrieve and explore batches of article metadata

* Understand the different strengths and limitations of both databases

* Fetch citing and cited-by data for specific articles of interest

* Define additional parameters for answering specific research questions
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RMarkdown Scripts with instructions and exercises will be provided, so no prior programming or API knowledge is required. However, it is essential that attendees bring a laptop with R and RStudio already installed if they wish to actively participate. We also strongly recommend pre-installing packages "rcrossref" and "openalexR" in case internet issues arise on the day. All workshop resources, including scripts and dummy data, will be made available to all AIMOS attendees via GitHub.

Hackathon 3 (SWHB402)

Name: Xumou Zhang, Qixuan Hu, Angela Pan, & Adam Dunn

Title: CTLlama: A New Language Model To Enable Meta-Research Involving Clinical Trials

Abstract: Clinical trial registrations are an open but underutilised source of information for meta-research. Studies in the area include identifying biases in design and reporting, but to date have been limited in scope because they are time-consuming and require specialised expertise.

We developed and evaluated CTLlama, a fine-tuned large language model designed as a general-purpose tool to support meta-research in clinical trials. By releasing CTLlama to the community, our aim is to support the automation of meta-research tasks; to shift the field from small, focused studies to at-scale monitoring of trial design, reporting, and synthesis.

The hackathon will begin with a demonstration of the model: (a) identifying meaningful changes in registered outcomes between prospective trial registrations, updates to the registration, and those reported in published articles; and (b) predicting differences in serious adverse events across study arms to flag unexpected results. These tasks highlight the model's capability of supporting automated workflows that reduce manual effort and improve the scalability of meta-research analyses.

Hackathon participants will then be given access to a web-based interface for CTLlama and invited to test the model on meta-research tasks that may involve extracting, evaluating, or synthesising information from clinical trial registrations and their linked publications. The hackathon will conclude with a discussion of the strengths and weaknesses of the model for supporting meta-research tasks and the potential to support at-scale meta-research efforts.

Hackathon 4 (SWHB411)

Name: Ashleigh Hooimeyer, Kellia Chiu, Akihiko Ozaki, Akemi Hara, & Barbara Mintzes

Title: Using Industry Disclosure Data To Examine Financial Relationships With Clinicians And Patient Organisations.

Abstract: Financial relationships between the pharmaceutical industry and medical sector are common, including sponsorship of patient organisations, payments to doctors for travel and speaking at educational events, and sponsorship of educational events attended by a variety of health professionals. This can influence prescribing decisions, guideline recommendations, and advocacy for medicine reimbursement.

Medicines Australia is the trade organisation for many pharmaceutical companies in Australia; under its Code of Conduct, member companies are required to disclose these payments. We have used this data to examine the nature of payments to patient organisations and health professionals in Australia, in an attempt to untangle the complicated relationships between them and the pharmaceutical industry. Similar databases have been developed in other countries, including Japan, where the Yen for Docs project has highlighted patterns of industry influence, public transparency initiatives, and ongoing challenges to structural reform.

In this hackathon, we will include a brief panel overview on previous and current work using these data, including challenges with verification, accuracy, and utility, and comparisons between disclosure systems in Australia and Japan. Delegates will then be invited to explore the datasets and brainstorm further collaborative research opportunities, including opportunities to compare and use datasets from other countries.

09:30: Parallel Sessions

Workshop 6 (main)

Name: Harrison Hansford & Aidan Cashin

Title: On TARGET: Improving Observational Studies Of Interventions Through Target Trial Emulation

Abstract: Target trial emulation is a framework for conducting observational studies of interventions that helps investigators avoid introducing common design related biases and improve the quality of their analysis and possibility of causal inference. Despite the increasing interest in the framework by journals, policymakers and funders, studies using the framework are often poorly conducted and reported, limiting their impact on practice (Hansford et al., JAMA Network Open, 2023). When applied and reported appropriately, the target trial framework can transform the trustworthiness, replicability and quality of observational research.

This workshop will introduce the target trial framework, explain how it can improve the quality and trustworthiness of observational analyses of interventions, and introduce the TARGET reporting guideline. The workshop aims to improve knowledge of the target trial framework and how to apply the principles in their own research or appraisal of literature (e.g. using ROBINS-I) and improve knowledge on how to use the TARGET guideline to support transparent reporting of these studies.

Aidan and Harrison led the international, consensus-based reporting guideline, TARGET (forthcoming, co-published by JAMA & BMJ), alongside Miguel Hern'an, the developer of the target trial framework.

Workshop 8 (SWHB401)

Name: Kylie Hunter & David Nguyen

Title: Safeguarding Research Integrity With The Updated Ipd Integrity Tool

Abstract: Increasing concerns about research trustworthiness highlight the importance of conducting integrity checks before relying on trial findings. Scrutinising individual participant data (IPD; raw row-by-row data) enables more comprehensive integrity checks than published or aggregate data, and can substantially improve detection of potential issues.

To address the lack of guidance, we developed the IPD Integrity Tool with a semi-automated R Markdown script to assess the trustworthiness of randomised trials. We have since updated this tool and developed alternative Excel and web-based versions to improve accessibility and uptake. Updates were based on feedback from meta-analysts, journal editors, publishers, statisticians, and other stakeholders, gathered through piloting, workshops, collaborative networks, and enquiries.

This workshop aims to:

- Introduce the updated Individual Participant Data (IPD) Integrity Tool
- Demonstrate how the tool can be used to assess the trustworthiness of randomised trials
- Build participants' skills in applying integrity checks to IPD

Participants will engage in hands-on activities applying the IPD Integrity Tool to evaluate study trustworthiness using example trial datasets. There will also be opportunities for open discussion, feedback, and questions to help shape future developments of the tool and its applications.

11:00: Plenary 3 (main)

Chair: Kellia Chiu

Name: Nicholas Chartres (Chaired by Kellia Chiu)

Title: Corporate Vectors Of Chronic Disease: Using Internal Industry Documents To Safeguard Environmental Health Research Integrity

Abstract: Government decisions profoundly influence the health of populations. These decisions are based on evaluating the available science. Thus, the methods that are used to identify and evaluate the science have profound impact on people's health. Therefore, it is critical that government decision-making be based on transparent, consistent methods that reduce bias, consistent with academic standards, including principles of open science. Further, government science review boards and advisory panels responsible for evaluating original science or the science of government agencies, must be free of financial conflicts of interest to ensure the integrity of government advice and recommendations.

Using a case study of federal chemical policy in the United States, this talk will highlight why failing to address systemic issues of industry influence inside government regulatory agencies will continue to lead to the undermining of research integrity in environmental health, regardless of how rigorous academic standards and practices are. It will explore how the chemical industry has corrupted systematic review, developed their own scientific standards for conducting risk assessment that systematically underestimate harm, muddied the waters on financial conflicts of interest and flooded scientific boards and agencies with industry actors

so that even when rigorous science has been conducted, scientific conclusions have been shaped to ensure hazardous products remain on the market.

Finally, it will discuss a critical program of work that is developing counter strategies to safeguard against these harmful industry practices to research integrity and government decision making, including through the use of previously secret internal industry documents. These documents provide direct evidence in the form of firsthand accounts of industry tactics used to avoid, delay and prevent regulation and undermine existing regulations in place. Such evidence was instrumental in sunshining tobacco industry tactics, which lead to increased public awareness, changes to tobacco policy and thus this their ability to influence government agencies responsible for regulating their harmful products.

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