Transparency in the Reporting of Artificial Intelligence – The TITAN Guideline

Riaz A. Agha[1], Ginimol Mathew[2], Rasha Rashid[3], Ahmed Kerwan[4], Ahmed Al-Jabir[5], Catrin Sohrabi[2], Thomas Franchi[6], Maria Nicola[7], Maliha Agha[1] and TITAN Group

[1]Premier Science, London, UK
[2]Royal Free London NHS Foundation Trust, London, UK
[3]Imperial College School of Medicine, London, UK
[4]Harvard T.H. Chan School of Public Health, Boston, USA
[5]University College London Hospital, London, UK
[6]Wellington Regional Hospital, Wellington, New Zealand
[7]Imperial College London, London, UK

Correspondence to:
Riaz A. Agha,
riaz@premierscience.com

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ABSTRACT

The use of AI in research and the literature is increasing. The need for transparency is clear. Here we present a guideline to transparently report the use of AI in any manuscript in general. The guideline items cover; declaration, purpose and scope, AI tools and configuration, data inputs and safeguards, human oversight and verification, bias, ethics and regulatory compliance and reproducibility and transparency. These items have been confirmed in a recent Delphi consensus exercise with high participation and agreement. This guide will evolve over time as technology, systems and behaviour evolve.

Keywords: AI transparency guidelines, Scholarly publishing, Delphi consensus exercise, SCARE PROCESS STROCSS updates, AI use in research

Introduction

Artificial intelligence (AI) is increasingly being used in research and the development of scholarly literature.[1–3] With this comes the necessity for transparency in reporting its use. It is now the responsibility of editors, journals, publishers, and the wider scholarly publishing community to ensure authors declare this in a transparent and comprehensive manner. The recent update to the SCARE, PROCESS, and STROCSS guidelines has made significant progress in this direction, and as AI and its use evolve, so will the guidelines.[4–6] These guidelines were updated through a Delphi consensus exercise, and the papers underwent peer review, AI review, editorial review, and subsequent refinement.

Here, we provide a brief guideline for declaring the use of AI in various article types, including review articles, different experimental studies, editorials, letters, and more, to ensure transparency in their reporting. The guideline items cover; declaration, purpose and scope, AI tools and configuration, data inputs and safeguards, human oversight and verification, bias, ethics and regulatory compliance and reproducibility and transparency.

Methods

The guideline development group responsible for the recent SCARE, PROCESS, and STROCSS guideline updates reconvened to create this general-purpose use of AI guideline. Here, we utilize the same items approved through the SCARE, PROCESS, and STROCSS guideline development process (Table 1). Since these items have already gone through a Delphi consensus exercise among 49 participants with over 90% response and strong agreement, we felt it unnecessary to repeat this exercise.

Conclusion

The authors commend these items to the scholarly community to enhance transparency in reporting AI usage (TITAN). We will monitor the development of AI use in research and the scholarly literature to ensure these guidelines remain up to date.

TITAN Group Contributors

1. Achilleas Thoma, McMaster University, Canada
2. Alessandro Coppola, Sapienza University of Rome, Italy
3. Andrew J Beamish, Swansea Bay University Health Board, Swansea University, UK
4. Ashraf Noureldin, Almana Hospital, Khobar, Saudi Arabia
5. Ashwini Rao, Manipal Academy of Higher Education Manipal, India
6. Baskaran Vasudevan, MIOT Hospital, Chennai, India
7. Ben Challacombe, Guy's and St Thomas' Hospitals, UK
8. C S Pramesh, Tata Memorial Hospital, Homi Bhabha National Institute and National Cancer Grid, India
9. Duilio Pagano, IRCCS-ISMETT – UPMC Italy, Italy
10. Frederick Heaton Millham, Harvard Medical School, USA
11. Gaurav Roy, Cactus Communications Pvt Ltd, India
12. Huseyin Kadioglu, Saglik Bilimleri Universitesi, Turkiye
13. Iain James Nixon, NHS Lothian, UK
14. Indraneil Mukherjee, Staten Island University Hospital Northwell Health, USA
15. James Anthony McCaul, Queen Elizabeth University Hospital Glasgow and Institute for Cancer Therapeutics University of Bradford, UK
16. James Ngu, Changi General Hospital, Singapore
17. Joerg Albrecht, Cook County Health, USA
18. Juan Gomez Rivas, Hospital Clinico San Carlos, Madrid, Spain
19. K Veena L Karanth, District Hospital Udupi, India
20. Kandiah Raveendran, Fatimah Hospital, Malaysia
21. M Hammad Ather, Aga Khan University, Pakistan
22. Mangesh A. Thorat, Centre for Cancer Screening, Prevention and Early Diagnosis, Wolfson Institute of Population Health, Queen Mary University of London, London, UK; Breast Services, Homerton University Hospital, London, UK
23. Mohammad Bashashati, Dell Medical School, UT Austin, USA
24. Mushtaq Chalkoo, Government Medical College, Srinagar, Kashmir, India

Author contribution:
Riaz A. Agha – conceptualisation and study design, supervision of the Delphi process, data interpretation, manuscript drafting and critical revision, approval of the final manuscript. Ahmed Kerwan, Ahmed Al-Jabir, Catrin Sohrabi, Thomas Franchi, Ginimol Mathew, Maria Nicola, Rasha Rashid, Maliha Agha and Riaz A. Agha – Participation in study design, generation of Delphi survey materials, data collection and analysis, contribution to drafting of new checklist items, manuscript writing and revision, approval of the final manuscript

Guarantor: Riaz A. Agha

Provenance and peer-review: Unsolicited and externally peer-reviewed

Data availability statement: The Delphi survey data that informed this guideline (individual expert ratings and comments) are confidential and not publicly available, in accordance with the consensus process protocol. All relevant aggregated results are reported in this article

Table 1 | The TITAN guideline items

TITAN Guideline Checklist 2025			
Topic	**Item**	**Description**	**Page Number**
Artificial Intelligence (AI) (some journals may prefer this in the methods and/or acknowledgments section, and it should also be declared in the cover letter)	1	**Declaration of whether any AI was used in the research and manuscript development** • State no, if that's the case. • If yes, proceed to item 1a.	1
	1a	**Purpose and Scope of AI Use** • Precisely state why AI was employed (e.g., development of research questions, language drafting, statistical analysis/summarisation, image annotation, etc.). • Was generative AI utilised, and if so, how? • Clarify the stage(s) of the reporting workflow affected (planning, writing, revisions, figure creation). • Confirmation that the author(s) take responsibility for the integrity of the content affected/generated	1
	1b	**AI Tool(s) and Configuration** • Name each system (vendor, model, major version/date). • State the date it was used • Specify relevant parameters (e.g., prompt length, plug-ins, fine-tuning, temperature). • Declare whether the tool operated locally on-premises, or via a cloud API and any integrations with other systems.	1
	1c	**Data Inputs and Safeguards** • Describe categories of data provided to the AI (patient text, de-identified images, literature abstracts). • Confirm that all inputs were de-identified and compliant with GDPR/HIPAA. • Note any institutional approvals or data-sharing agreements obtained.	1
	1d	**Human Oversight and Verification** • Identify the supervising author(s) who reviewed every AI output. • Detail the process for fact-checking, clinical accuracy checks • State whether any AI-generated text/figures were edited or discarded. • Acknowledge the limitations of AI and its use	1
	1e	**Bias, Ethics and Regulatory Compliance** • Outline steps taken to detect and mitigate algorithmic bias (e.g., cross-checking against under-represented populations). • Affirm adherence to relevant ethical frameworks. • Disclose any conflicts of interest or financial ties to AI vendors.	1
	1f	**Reproducibility and Transparency** • Provide the exact prompts or code snippets (as supplementary material if lengthy). • Supply version-controlled logs or model cards where possible. • If applicable, state repository, hyperlink, or digital object identifier (DOI) where AI-generated artefacts can be accessed, enabling attempts at independently replication of the query/input.	1

25. Oliver J. Muensterer, Dr. von Hauner Children's Hospital, LMU Medical Center, Munich, Germany
26. Patrick Bradley, Nottingham University Hospital, UK
27. Prabudh Goel, All India Institute of Medical Sciences, New Delhi, India
28. Prathamesh Pai, P D Hinduja Hospital, Khar, India
29. Priya Shinde, Homerton University Hospital, UK
30. Priya Ranganathan, Tata Memorial Centre, India
31. Raafat Yahia Afifi Mohamed, Cairo University, Egypt
32. Richard David Rosin, University of the West Indies Barbados, Barbados
33. Roberto Cammarata, Fondazione Policlinico Campus Biomedico, Italy
34. Roberto Coppola, Campus Bio Medico University, Italy
35. Rolf Wynn, UiT The Arctic University of Norway, Norway
36. Salim Surani, Texas A&M University, USA
37. Salvatore Giordano, University of Turku, Finland
38. Samuele Massarut, Centro di Riferimento Oncologico Aviano IRCCS, Italy
39. Shahzad G. Raja, Harefield Hospital, UK
40. Somprakas Basu, All India Institute of Medical Sciences Rishikesh, India
41. Syed Ather Enam, Aga Khan University, Pakistan
42. Teo Nan Zun, Changi General Hospital, Singapore
43. Todd Manning, Bendigo Health and Monash University, Australia
44. Veeru Kasivisvanathan, University College London, UK
45. Vincenzo La Vaccara, Fondazione Policlinico Campus Bio-Medico di Roma, Italy
46. Zubing Mei, Shuguang Hospital, Shanghai University of Traditional Chinese Medicine, China

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