Reporting guidelines: When to use them and why

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In academic research, clear, transparent reporting is essential to ensure that studies can be accurately evaluated and replicated. To this end, an increasing number of specialized reporting guidelines have been made available to authors, covering a wide range of fields and types of studies. These guidelines, often structured as checklists, provide a standardized format for researchers to present their methodologies, data, and results.

As the demand for transparency and reproducibility grows, more and more journals are requiring authors to adhere to these guidelines. But what reporting guidelines are available, and for which kinds of studies? In this short featured article, we'll briefly introduce some of the more common guidelines.

Choosing the right guidelines

Choosing the right guidelines depends on the study type and discipline. There are a wide range of reporting guidelines across different fields of research, and each one is tailored to specific types of studies and ensures that crucial information is consistently reported.

For research in medicine, healthcare, and related fields, the EQUATOR Network is a key resource for guidelines. Reporting guidelines are arranged according to the target study type,

such as clinical trials, qualitative research, or case reports. The Equator Wizard is a helpful tool that researchers can use to find the right guideline based on their study's design and field. This tool simplifies the process of navigating through the many available reporting guidelines.

If you're publishing in a journal, start with your target journal's instructions for authors. Many journals either encourage or outright require the use of reporting guidelines for new submissions, and they will very likely specify which reporting guidelines to follow. Some journals also use modified versions of standard checklists, so it is essential to consult the specific journal's requirements.

In addition, when using reporting guidelines, authors should properly cite it in their manuscript. Citing the guidelines acknowledges their role in structuring the study and enables readers and reviewers to verify compliance. Citation formats vary, but many guidelines provide specific instructions on how to reference them.

Key reporting guidelines by field

Medical sciences and clinical research

Reporting guidelines are well-established in the medical sciences and clinical research. These guidelines cover all major study types, and most have several more specialized extensions available. The EQUATOR Network serves as a central hub for these.

- **CONSORT (Consolidated Standards of Reporting Trials):** These guidelines are used for randomized controlled trials. First published in 1996, these were recently updated this year. A checklist and a flow diagram are included for ease of use, and many journals require these to be uploaded with new submissions. A number of specialized extensions are available, such as CONSORT Harms (for discussing potential harms in randomized trials) and CONSORT Herbal (for trials of herbal interventions).
- **STROBE (Strengthening the Reporting of Observational Studies in Epidemiology):** STROBE was designed for observational studies in 2007, and has been translated into several languages, including Japanese. It provides separate checklists for cohort, case-control, and cross-sectional studies. Specialized extensions are available on the EQUATOR website.
- **PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses):** These guidelines are used for systematic reviews and meta-analyses. It also includes a checklist

and flowchart to document the literature selection process. A Japanese version is available, as are several specialized extensions.

- **CARE (Case Report Guidelines):** These guidelines focus on the reporting of case reports. In addition to the CARE checklist, the CARE Steering Group have released a flowchart to use when seeing a patient or performing a chart review to ensure compatibility with CARE guidelines.
- **SPIRIT (Standard Protocol Items: Recommendations for Interventional Trials):** These guidelines, used for trial protocols, were made to complement CONSORT (and like CONSORT, a 2025 update is currently in the works). A checklist is available to ensure protocol completeness. Other languages, as well as specialized extensions, can be found on the EQUATOR website.

Social sciences and psychology

Many EQUATOR guidelines may also be applicable to social science or psychological research, depending on the specific study type.

- **SRQR (Standards for Reporting Qualitative Research):** Part of the EQUATOR Network, SRQR covers qualitative research across disciplines. A checklist is provided for transparency in qualitative methodologies. These reporting guidelines were published in full in *Academic Medicine*, and detailed descriptions of each item as well as examples are available in the supplementary material.
- **JARS (Journal Article Reporting Standards):** Developed by the American Psychological Association, JARS provides guidelines for reporting quantitative, qualitative, and mixed-methods research in psychology and related fields. Depending on the study, several specialized guidelines are available, such as JARS-QUANT (for quantitative research) or JARS-REC (for guidance on discussing race, ethnicity, and culture).

Other fields

The use of reporting guidelines is less widespread in fields outside of medicine and the social science, though certain organizations provide instructions on best practices. For example, IEEE, a major organization in the field of electrical and electronic engineering research, has outlined key ethics guidelines for publishing research.

In addition, major publishers may provide their own standard of reporting. *Nature* is a prime example of this—its reporting summary details requirements on reporting statistical analysis, software and code, cell lines, and more, and is required for submission to most of its journals.

For research in biology, biochemistry, and related disciplines, the FAIRsharing initiative (formerly MIBBI Foundry) provides a centralized database of reporting guidelines and data standards across various scientific fields. Originally created as a hub for minimum-information checklists for biological and biomedical research, FAIRsharing now catalogues standards that extend beyond the life sciences, including areas such as environmental science, artificial intelligence, and materials science.

Notable guidelines from FAIRsharing include:

- **MIAME (Minimum Information About a Microarray Experiment):** Ensures that microarray gene expression data are well-documented and reproducible.
- **MIAPE (Minimum Information About a Proteomics Experiment):** Provides reporting requirements for proteomics studies, covering mass spectrometry data and protein-identification methods.
- **MIxS (Minimum Information about any (x) Sequence):** A standardized framework for reporting sequencing-based studies, widely used in genomics and bioinformatics.

FAIRsharing does not function as a mandatory reporting guideline repository like EQUATOR, but it serves as a valuable resource for researchers in aligning their studies with best practices in data transparency and reproducibility.

Summary

Following reporting guidelines helps ensure that research is transparent, reproducible, and valuable to the wider academic community. These standards help researchers communicate their findings in a clear and consistent way, facilitating comparison and replication.

For further assistance or to clarify which reporting guidelines are right for your research, feel free to reach out to us. We are happy to help you navigate the wide array of available resources and ensure your research meets the highest standards.

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