EDITORIAL

REPORTING GUIDELINES AND CHECKLISTS TO IMPROVE MEDICAL WRITING

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Pobody's nerfect.[1] All of us sincerely work hard to make our research, articles and journals perfect, however no author, reviewer or editor can ever be 'know all' or 'do all correct'. Quality control has been the main theme for all services over the last quarter of a century. The medical journalism was never an exception. The last two decades were especially important in the history of medical journalism as measures for quality control were developed, tested, standardised and applied. The products of these extraordinary efforts are various guidelines, checklists and flow diagrams that are now part and parcel of modern medical journalism. These tools make the task of authors, reviewers, and editors easy. They provide a systematic way by which authors know exactly how a particular manuscript is to be prepared, the reviewers make out what they are supposed to evaluate and the editors identify problems with submitted as well as reviewed or corrected manuscripts. Another valuable and highly recommended use of these materials is critical appraisal of published articles (journal clubs).

In 1993 a group of medical journal editors, epidemiologists and researchers discussed ways of improving reporting of randomised trials at Ottawa (Canada). This meeting gave birth to a 32 item checklist called 'Standardized Reporting of Trials' (SORT) statement.[2] Later on in the same year another expert group met at California (USA) with the same objective and came up with another set of recommendations for randomised trials called (Asilomar proposals).[3] In 1995 a joint meeting of both the groups was organised in Chicago (USA). This meeting merged the best points of both SORT and Asilomar proposals into Consolidated Standards of Reporting Trials (CONSORT) Statement, which was first published in 1996.[4] The statement was revised in 2001[5] and then in 2010[6].

The quality medical journals from all over the world adapted the CONSORT statement, subsequent checklist and flowchart. There is concrete evidence that incorporation of these lists improved the standard of manuscripts.[7] In addition the process of peer review and editorial review was made easy and standardised by these checklists. The impact of CONSORT is reflected by over 15,000/month unique hits on the CONSORT website. The success of CONSORT statement led to shift of focus to other types of research as well as research methodology and biostatistics. This led to introduction of a number of guidelines, checklists and flow diagrams for specific components, article types and tasks in medical writing.

The purpose of this editorial is to identify and summarise these statements, checklists and flowcharts for awareness of authors, reviewers, researchers and editors.

CONSORT

(Consolidated Standards of Reporting Trials)

It is a 25-item checklist and a flow diagram that is an evidence-based, minimum set of recommendations for reporting randomised controlled trials (RCTs). The checklist items focus on reporting how the trial was designed, analysed, and interpreted while the flow diagram displays the progress of all participants through the trial. The complete information, guidelines, checklist and flow diagram are available at http://www.consort-statement.org/

STROBE

(Strengthening the Reporting of Observational Studies in Epidemiology)

This covers all the types of observational studies that include cohort, case-control, and cross-sectional studies. The most recent is a 22 item combined checklist. All these are available at http://www.strobe-statement.org/

STARD

(Standards for the Reporting of Diagnostic Accuracy Studies)

This 25-item checklist and an associated flow diagram ensure improvement in the accuracy and completeness of reporting of diagnostic accuracy studies. It simplifies assessing the potential for bias in the study (internal validity) and its generalisability (external validity). They are available at http://www.stard-statement.org/

STREGA

(Strengthening the Reporting of Genetic Association)

This is an extension of STROBE. It actually provides additions to 12 of the 22 items on the STROBE checklist. It ensures standardisation and accuracy in reporting studies on genetic associations with disease. It is available at http://www.med.uottawa.ca/public-health-genomics/web/eng/strega.html.

PRISMA

(Preferred Reporting Items for Systematic Reviews and Meta-Analyses)

Comprising a 27 item checklist and a four-phase flow diagram, this is an evidence-based minimum set of items for preparing systematic reviews and meta-analyses. The checklist and flow diagram are available at the official website http://www.prisma-statement.org/

SQUIRE
(Standards for Quality Improvement Reporting Excellence)
These guidelines and associated checklist help authors in writing standardised articles about quality improvement in healthcare so that findings may be easily discovered and widely disseminated. The checklist and relevant material is available at http://squire-statement.org

COREQ
(Consolidated criteria for Reporting Qualitative research)
The full record of this 32-item checklist for interviews and focus groups is available at the equator network[8] and Cochrane collaboration[9] websites.

ENTREQ
(Enhancing Transparency in Reporting the Synthesis of Qualitative Research)
The full record of this tool for improving quality of reporting of qualitative research is available at the equator network[8] and Cochrane collaboration[9] websites.

CHEERS
(Consolidated Health Economic Evaluation Reporting Standards)
Economic evaluations of health interventions pose a particular challenge for reporting. This 24 items statement is a standardised reporting guidance for researchers reporting economic evaluations and the editors and peer reviewers assessing them for publication. It is available at the equator network[8] and Cochrane collaboration[9] websites.

CARE
(The CARE Guidelines: Consensus-based Clinical Case Reporting Guideline Development)
These guidelines provide a framework to support the need for completeness, transparency and data analysis in case reports. The CARE Statement, CARE checklist, and a Case Report Writing Template offer a rationale and a standardised format for authors to prepare more complete and transparent case reports. It is available at http://www.care-statement.org/ as well as equator network[8] and Cochrane collaboration[9] websites.

SAMPL
(Statistical Analyses and Methods in the Published Literature)
These guidelines are for standardisation of statistical methods used in biomedical manuscript and interpretation of analysis. The full record of these guidelines is available at the equator network website.[8]

ARRIVE
(Animal Research: Reporting *In Vivo* Experiments)
Enormous work has been done to protect unnecessary use, overuse, and misuse of animals in medical research. ARRIVE guidelines were developed as part of an NC3Rs (The National Centre for the Replacement, Refinement and Reduction of Animals in Research, London, UK) initiative to improve the design, analysis and reporting of research using animals, maximising information published and minimizing unnecessary studies. These guidelines were published in 2010.[10] They are available at NC3Rs website http://www.nc3rs.org.uk/page.asp?id=1357

SUGGESTIONS

Identifying the relevant reporting guidelines, checklists and flow diagrams and following them in letter and spirit can ensure hassle free publication of our manuscripts, as all quality journals have (or are) implementing them.

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