## Reporting Guidelines in Health Research

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Guidelines for reporting health research are important tool which improves accuracy and transparency of publications. Well developed health research reporting guidelines provide structured format for authors to present research methods, results and conclusions. Additionally, it gives valuable information on research publications, enhancing reproducibility, clarity and reliability of study findings. The efficient use of reporting guidelines help researchers to publish high quality health research. A research group consisting; academicians, clinicians, medical journal editors, statisticians, systematic reviewers and content experts had developed reporting guidelines and flow diagrams. A reporting guideline is a checklist and flow diagram which facilitates to improve quality of health research articles and guides authors in reporting specific type of research. Reporting guidelines is accessible depending upon the research/study design which includes detailed checklist of 20 to 40 items. The main purpose of reporting guidelines was to determine the minimum set of information that gives complete description of the specific type of study.

The EQUATOR (Enhancing the QUAlity and Transparency Of health Research; Network's Library for Health Research Reporting) is an international initiative that aims to improve the quality of research publications. It also provides comprehensive list of reporting guidelines and other material which helps to improve reporting. Reporting guidelines enables readers to assess and repeat research and also helps to ensure research work done precisely. Research studies should be; scientific, have good methodological quality, and accurate. Detailed reliable guidelines and checklists developed by experts are available for different types of research studies.<sup>1</sup>

Some of the commonly used guidelines in health research reporting are:

PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) is a guidelines for reporting systematic reviews and meta-analyses, published in 2009, comprises of 27-item checklist and four-phase flow diagram. The checklist includes; title, abstract, introduction, methods, results, discussion, and source of funding or finance. The flow chart maps different features such as screening, eligibility, and inclusion/exclusion criteria for the report.<sup>2</sup> CONSORT (Consolidated Standards of Reporting Trials) is a useful set of guidelines for complete and transparent reporting of randomized controlled trials developed in 2010. It includes 25-item checklist and flow diagram. The checklist guides; trial design, analyze and interpretation of findings and flow diagram depicts different phases of the trial.3 STROBE (STrengthening the Reporting of OBservational studies in Epidemiology) includes 22-item checklist, specifically designed to address observational studies; cohort, case-control, and cross-sectional studies introduced in 2007. STREGA (STrengthening the REporting of Genetic Association studies), extension of STROBE for genetic association studies.<sup>4</sup> MOOSE (Meta-analysis Of Observational Studies in Epidemiology) is a set of guidelines for reporting and enhancing epidemiological meta-analysis published in 2000. It consists of 35-item checklist, further divided into subcategories: title and abstract, introduction, sources and study selection, results, and discussion.<sup>5</sup> STARD (STAndards for the Reporting of Diagnostic accuracy studies) commenced in 2003 for reporting studies on diagnostic or prognostic accuracy. It includes 25-point checklist that comprises; heading, title, abstract, keywords, introduction, methods, and discussion. The flow diagram helps in reporting recruitment protocol and order in which trials and tests have been conducted. SPIRIT (Standard Protocol Items: Recommendations for Interventional Trials), developed in 2007; one of the most recent sets of guidelines for reporting scientific trial protocols with 33-item checklist. It had five major domains; administrative information, introduction, methodologies, ethical concerns, and appendices. SAMPL (Statistical Analyses and Methods in the Published Literature) developed in 2013, used in reporting basic statistical analysis published in biomedical journals.8 CARE (Case Report), 10-item checklist developed in 2013.9 COREQ (COnsolidated criteria for REporting Qualitative research) introduced in 2007, 32-item checklist for interviews and focus groups.<sup>10</sup> SRQR (Standards for Reporting Qualitative Research) was published in 2014, consists of 21 items.<sup>11</sup>

Reporting guidelines are potent tools which help to improve transparency, completeness and accuracy of health research and increase value of published research. Most of the medical and biomedical journals believe in evidence based practice thus, reporting guidelines helps to improve the quality of health research. These guidelines help researcher in preparing or reviewing a specific type of research which includes minimum set of items to be reported in the form of checklist and flow diagram. Guidelines enable another researcher to replicate studies accurately and improve reproducibility. It also provide framework for peer reviewers to assess research manuscript effectively and helps to publish quality articles. Reporting guidelines serve as a roadmap for researchers/authors to include all the essential information required for publication.

Most of the medical journals of Nepal have not endorsed reporting guidelines thus; editors and researchers may have difficulty in assessing quality and valid research. Therefore, implementing reporting research guidelines in publication adds value to manuscript and plays vital role in maintaining the integrity, quality and credibility of research.

## **Sources:**

- 1. http://www.equator-network.org
- 2. Moher D, Liberati A, Tetzlaff J, Altman DG. Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med. 2009; 6(6). doi:10.1371/journal.pmed1000097
- 3. Schulz KF, Altman DG and Moher D. CONSORT 2010 Statement: updated guidelines for reporting parallel group randomised trials. Ann Int Med. 2010;152(11):726-32.
- 4. Von Elm E, Altman DG, Egger M, Pocock SJ, Gotzsche PC, Vandenbroucke JP. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) Statement: guidelines for reporting observational studies. BMJ. 2007;335(7624):806-808.
- 5. Stroup DF, Berlin JA, Morton SC, Olkin I, Williamson GD, Rennie D, Moher D, Becker BJ, Sipe TA, Thacker SB. Meta-analysis of observational studies in epidemiology: a proposal for reporting. Meta-analysis Of Observational Studies in Epidemiology (MOOSE) group. JAMA. 2000; 283(15):2008-2012.
- 6. Bossuyt PM, Reitsma JB, Bruns DE, Gatsonis CA, Glasziou PP, Irwig L, LijmerJG Moher D, Rennie D, de Vet HCW, Kressel HY, Rifai N, Golub RM, Altman DG, Hooft L, Korevaar DA, Cohen JF, For the STARD Group. STARD 2015: An Updated List of Essential Items for Reporting Diagnostic Accuracy Studies. BMJ. 2015;351.
- 7. Chan A-W, Tetzlaff JM, Altman DG, Laupacis A, Gøtzsche PC, Krleža-Jerić K, Hróbjartsson A, Mann H, Dickersin K, Berlin J, Doré C, Parulekar W, Summerskill W, Groves T, Schulz K, Sox H, Rockhold FW, Rennie D, Moher D. SPIRIT 2013 Statement: Defining standard protocol items for clinical trials. Ann Intern Med. 2013;158(3):200-207.
- 8. Lang TA and Altman DG. Basic Statistical Reporting for Articles Published in Biomedical Journals: The "Statistical Analyses and Methods in the Published Literature" or The SAMPL Guidelines" in: Smart P, Maisonneuve H, Polderman A (eds). Science Editors' Handbook, European Association of Science Editors, 2013.
- 9. Gagnier JJ, Kienle G, Altman DG, Moher D, Sox H, Riley D; the CARE Group. The CARE Guidelines: Consensus-based Clinical Case Reporting Guideline Development. BMJ Case Rep. 2013. doi: 10.1136/bcr-2013-201554
- 10. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. Int J Qual Health Care. 2007;19(6):349-357.
- 11. O'Brien BC, Harris IB, Beckman TJ, Reed DA, Cook DA. Standards for reporting qualitative research: a synthesis of recommendations. Acad Med. 2014;89(9):1245-1251.

