### CASE REPORTING GUIDELINES



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### THE ROLE OF CASE REPORTS

documenting the care of individual patients

- "Case reports and case series have a high sensitivity for detecting novelty and are a cornerstones of medical progress providing new ideas in medicine."
- "Good case reporting demands a clear focus to make explicit to the audience why a particular observation is important in the context of existing knowledge."

Vandenbroucke J. In Defense of Case Reports and Case Series. Ann Intern Med. 2001;134:330-334.

### Clinical Practice & Evidence-Based Medicine

"Without clinical expertise, practice risks becoming tyrannized by evidence, for even excellent external evidence may be... inappropriate for individual patients."

Sackett D. Evidence based medicine: what it is and what it isn't. BMJ Jan 1996:312;71-72

"High quality evidence doesn't necessarily imply strong recommendations, and strong recommendations can arise from low quality evidence."

Guyatt G, Oxman A, Schünemann H. GRADE: an emerging consensus on rating quality of evidence and strength of recommendations. *BMJ* 2008 April 26:336(7650);924-928

"In theory there is no difference between theory and practice. In practice there is."

Yogi Berra

# Health Research Reporting Guidelines

- 1962: The FDA required drug and medical device testing for safety and efficacy leading to the rise of controlled clinical trials and the concommitant decline of case reports).
- 1980s: Meta-analysis and Systematic Reviews—Lancet editorial (Richard Peto) on the role of aspirin in recurrent heart attacks.
- 1996: CONSORT Health Research Reporting Guidelines for randomized controlled trials (RCTs)
- 2013: CARE guidelines for case reports

# Health Research Reporting Guidelines

- Needs Assessment
- Delphi process
- Consensus Meeting
- Publish Health Research Reporting Guidelines
- Endorsement and Author utilization
- Evaluate Implementation

Moher D, Schulz KF, Simera I, et al. Guidance for developers of health research reporting guidelines. PLoS Med 2010;7:e1000217.



**The Narrative:** A case report tells a story in a narrative format that includes the presenting concerns, clinical findings, diagnoses, interventions, outcomes (including adverse events), and follow-up. The narrative should include a discussion of the rationale for any conclusions and other 'take-away' messages.

| Section                | ltem<br>Number | Description  |  |
|------------------------|----------------|--|--|
| Title                  | 1              | The words 'case report' should appear in the title along with phenomenon of greatest interest (symptom, diagnosis, test, intervention, etc.)   |  |
| Keywords               | 2              | The key elements of the case in 2-5 words  |  |
| Abstract               | 3              | a) Introduction—What does this case add? b) Case Presentation: symptoms, clinical findings, diagnoses, interventions, and outcomes c) Conclusion and 'take-away' lessons   |  |
| Introduction           | 4              | Brief background summary referencing the relevant medical literature   |  |
| Timeline               | 5              | Depicts important milestones in this case as a table or figure   |  |
| Patient<br>Information | 6              | <ul> <li>a) Demographic information</li> <li>b) Main symptoms as described by the patient (chief complaint)</li> <li>c) Medical, and family history including lifestyle and genetic information when possible</li> <li>d) Co-morbidities, past interventions and outcomes</li> </ul> |  |
| Clinical<br>Findings   | 7              | Relevant physical examination findings   |  |



| Section                      | Item<br>Number | Description  |  |  |
|------------------------------|----------------|--|--|--|
| Diagnostic<br>Assessments    | 8              | <ul><li>a) Diagnostic methods, challenges, and reasoning (including other possible diagnoses)</li><li>b) Prognosis where applicable</li></ul>  |  |  |
| Therapeutic<br>Interventions | 9              | Interventions (pharmacologic, surgical, clinician intervention, preventive, self-care, etc.) - Administration of intervention (dosage, frequency, duration, etc.) - Changes in the intervention (with explanations)  |  |  |
| Follow-up<br>and Outcomes    | 10             | Summarize the clinical course of all follow-up visits including  - Clinician assessed outcomes (patient assessment when appropriate)  - Important follow-up test results (positive or negative)  - Interventional adherence and tolerability (how was this assessed)  - Adverse and unanticipated events |  |  |
| Discussion                   | 11             | <ul> <li>a) Strengths and limitations of the management of this case</li> <li>b) Relevant medical literature</li> <li>c) Rationale for conclusions (assessment of cause and effect)</li> <li>d) The main 'take-away' lessons from this case</li> </ul>   |  |  |
| Patient<br>Perspective       | 12             | The patient should share his or her perspective or experience when appropriate   |  |  |
| Informed<br>Consent          | 13             | Did the patient give informed consent? Please provide if requested   |  |  |

| Section                   | Item | Checklist item description   | Reported on Page |
|---------------------------|------|--|------------------|
| Title                     | 1    | The words "case report" should be in the title along with what is of greatest interest in this case  |                  |
| Key Words                 | 2    | The key elements of this case in 2 to 5 key words  |                  |
| Abstract                  | 3a   | Introduction—What is unique about this case? What does it add to the medical literature?             |                  |
|                           | 3b   | The main symptoms of the patient and the important clinical findings                                 |                  |
|                           | 3c   | The main diagnoses, therapeutics interventions, and outcomes   |                  |
|                           | 3d   | Conclusion—What are the main "take-away" lessons from this case?                                     |                  |
| Introduction              | 4    | Brief background summary of this case referencing the relevant medical literature                    |                  |
| Patient Information       | 5a   | Demographic information (such as age, gender, ethnicity, occupation)                                 |                  |
|                           | 5b   | Main symptoms of the patient (his or her chief complaints)   |                  |
|                           | 5c   | Medical, family, and psychosocial history including co-morbidities, and relevant genetic information |                  |
|                           | 5d   | Relevant past interventions and their outcomes   | -                |
| Clinical Findings         | 6    | Describe the relevant physical examination (PE) findings.  |                  |
| Timeline                  | 7    | Depict important milestones related to your diagnoses and interventions (table or figure)            |                  |
| Diagnostic                | 8a   | Diagnostic methods (such as PE, laboratory testing, imaging, questionnaires).                        |                  |
| Assessment                | 8b   | Diagnostic challenges (such as financial, language, or cultural)                                     |                  |
|                           | 8c   | Diagnostic reasoning including other diagnoses considered  |                  |
|                           | 8d   | Prognostic characteristics (such as staging in oncology) where applicable                            |                  |
| Therapeutic               | 9a   | Types of intervention (such as pharmacologic, surgical, preventive, self-care)                       |                  |
| Intervention              | 9b   | Administration of intervention (such as dosage, strength, duration)                                  |                  |
|                           | 9c   | Changes in intervention (with rationale)   |                  |
| Follow-up and<br>Outcomes | 10a  | Clinician-assessed outcomes and when appropriate patient-assessed outcomes.                          |                  |
|                           | 10b  | Important follow-up test results   |                  |
|                           | 10c  | Intervention adherence and tolerability (How was this assessed?)                                     |                  |
|                           | 10d  | Adverse and unanticipated events   |                  |
| Discussion                | 11a  | Discussion of the strengths and limitations in the management of this case                           |                  |
|                           | 11b  | Discussion of the relevant medical literature.   |                  |
|                           | 11c  | The rationale for conclusions (including assessment of possible causes)                              |                  |
|                           | 11d  | The main "take-away" lessons of this case report .   |                  |
| Patient Perspective       | 12   | Did the patient share his or her perspective or experience? (Include when appropriate)               |                  |
| Informed Consent          | 13   | Did the patient give informed consent? Please provide if requested                                   | Yes 🗌 No 🗌       |

### CASE REPORTS

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#### **Integrative Medicine**

Case reports, systematically collected and aggregated can provide "real world" evidence of effectiveness and offer an example of interprofessional collaboration.

# Case Reports and the Care Guidelines

- Systematic case reports following the CARE guidelines (created from the CA in case and RE in reports) could:
  - Provide early signals of effectiveness, harms and cost
  - Inform clinical practice and improves clinical reasoning
  - Provide feedback on clinical practice guidelines, and
  - Generate testable hypotheses for clinical research

Gagnier J, Kienle G, Altman DG, Moher D, Sox H, Riley DS, and the Care Group. The CARE Guidelines: Consensus-based Clinical Case Reporting Guideline Development. *Journal of Clinical Epidemiology (JCE)*, 67(1):46-51. Simultaneously published in *BMJ Case Reports, Deutsche Ärtzeblatt, Headache, Global Advances in Health and Medicine, J. of Dietary Supplements*, and the *J. of Medical Case Reports (BMC*).