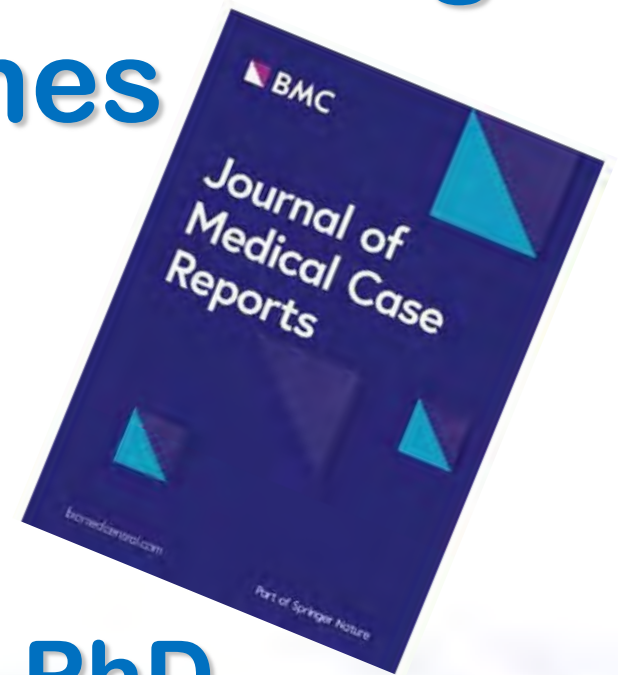
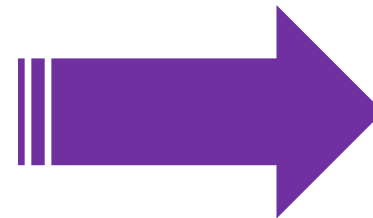


How to Write & Publish a Medical Case Report Using CARE Guidelines



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Outline



- Unique case not found in literature or supports similar case
- New, emerging, or rare diseases
- Novel or useful approach to treating patients
- Unexpected treatment results (resolution or complication)
- Adverse drug events/reports (ADE/ADR)
- Diagnostic errors or new diagnostic tools
- Suggested disease mechanisms
- Contributes to medical knowledge or need for change in clinical practice or diagnostic/prognostic approaches (BMC)



Case Report (Study) Definitions



- **Case Report**

- A rapid, short communication between busy clinicians about a patient that enhances their practice of medicine. (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5686928/>)
- “A detailed report of the patient’s symptoms/signs, diagnosis, treatment, and follow-up” (NCI Cancer.gov)
- “Describes a patient's medical problems and clinical management for scientific or educational purposes.” (Riley DS, Journal of Clinical Epidemiology, 2017)



Case Report (Study) Definitions



- **Case Series**

- A collection of similar case studies (2-4+)
- Often compared in a summary research table

Severe neurological manifestations of influenza during 2018-2019 influenza season: **Case series** of 13 pediatric patients.

Kutluk MG, Kadem EN.

Arch Argent Pediatr. 2021 Apr;119(2):e142-e148. doi: 10.5546/aap.2021.eng.e142.

- **Case Series Control**

- Type of observational study where participants are selected based on their outcome status.
- Case group has outcome of interest
- Control group does not have outcome of interest

(<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4817437/>)

Why Write a Case Report?



- Reports from the front lines that fills gaps in medicine
- Often the first line of evidence – 2M+ case reports (PubMed)
- *Discovery* – First to describe AIDS, Zika, Ebola, SARS, MERS, toxic shock syndrome, West Nile Virus, sickle-cell disease (Herrick JB, 1910), Creutzfeldt-Jacob disease transmission by blood transfusion, aloe-induced hepatitis, etc.
- Pharmacovigilance - First to describe adverse drug reactions (events) – Phase 4 of clinical research (Post Marketing Surveillance)
- Proposed new disease mechanism hypothesis



Colleague Communication



Clinicians (have expanded audience)

- Similar to conversations between colleagues
- Clinicians may have similar patients
- Case reports describe practice - always changing

Medical Students

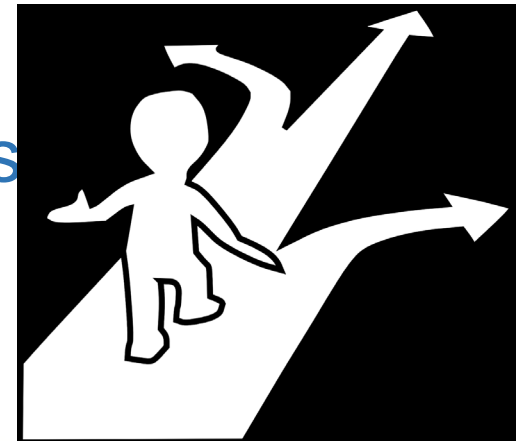
- Helps students develop critical thinking & problem solving skills
- Develop and hone scholarly writing skills
- First peer reviewed publication experience
- Authorship!
- Improves residency chances



Step 1 – Select a Topic



- Unique case not found in literature or supports similar case
- New, emerging, or rare diseases
- Unexpected treatment results (resolution or complication)
- Adverse drug events/reports (ADE/ADR)
- Novel or useful approach to treating patients
- Diagnostic errors or new diagnostic tools
- Suggested disease mechanisms
- Contributes to medical knowledge or need for change in clinical practice or diagnostic/prognostic approaches (BMC)



Step 2 – Select a Journal



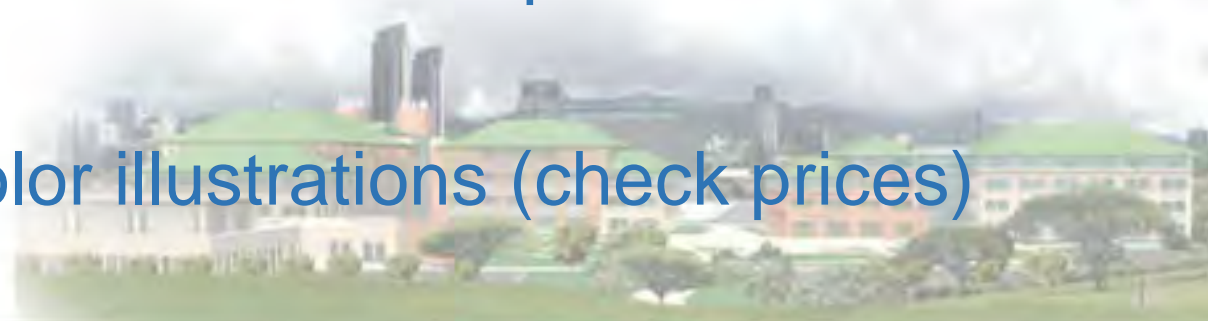
- What target audience (doctors & patients) would best benefit from the info?
- If indexed in PubMed, it is peer reviewed and locatable
- Some journals do NOT publish case reports. FIRST double-check the journal's "Author's Guidelines," or "Author's Instructions" to see "Types of Articles"
- Select a journal with a reasonable acceptance rate (unless you know the editor)



Step 2 – Select a Journal



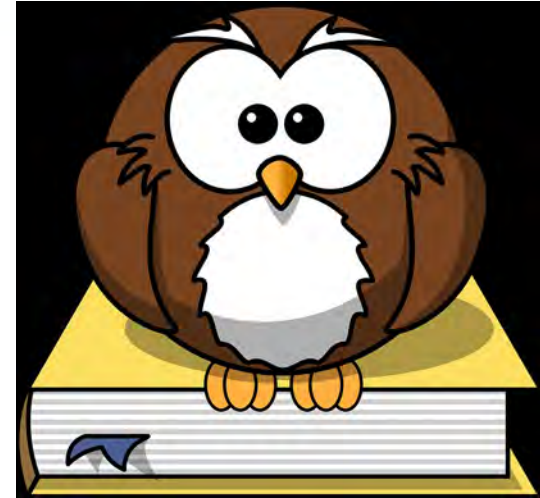
- Seek out medical association journals to reach clinicians
- Avoid “predatory journals”
 - Journals not indexed in PubMed or Embase
 - May charge \$250-\$3,000 for publication online forums without quality peer review
 - Some quality journals do charge
- Make sure there are no unreasonable publication fees
- Some do charge for color illustrations (check prices)



Step 3 – Read Instructions



- Listed as “Author’s Guidelines or “Author’s Instructions”



- Find by Googling the above terms with the journal name
- Also located on the journal’s website



Step 3 – Read Instructions



- **Prior to starting**, determine word & reference limit
- **Word Count Limit** – varies, **about 1,500 – 2,500** words (avoids overwriting, keeps focus)
 - About 250 words per double-spaced page (1 inch margins)
- About **20-30 references**



Step 4 – Search the Literature



- Search PubMed to see if your case study already exists
- You can still publish a supporting case
- Search for related research articles for your intro & discussion



Step 5 – Collect Informed Consent



Consent forms

Signed by patient, relative, or guardian

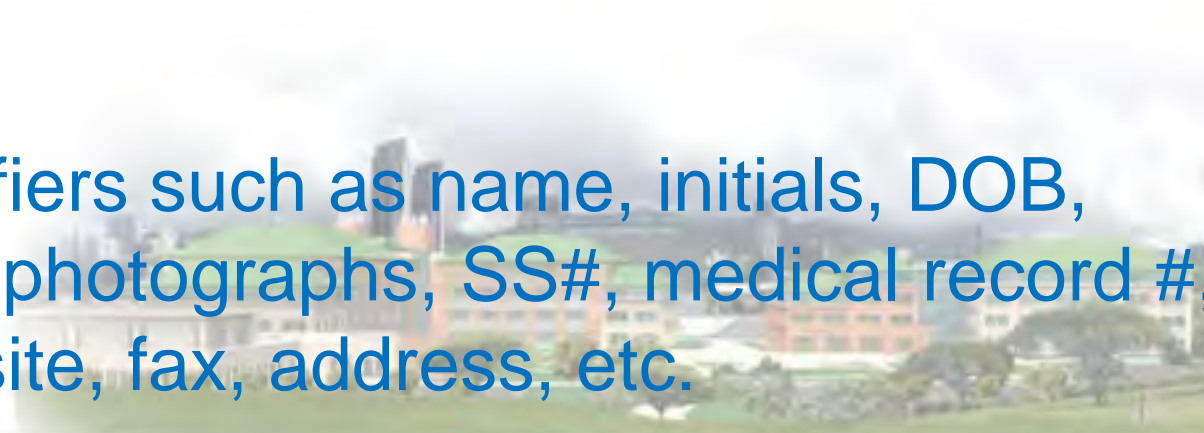
Children under 18 yrs sign assent forms

Use journal's required consent form (if available)

Use university and/or hospital consent forms

- De-identification

- Remove ALL identifiers such as name, initials, DOB, date of death, face photographs, SS#, medical record #, phone, email, website, fax, address, etc.



Step 6 – Collect Patient Perspective



When collecting consent forms,

Ask patient to write their perspective on the treatment(s) they received that can then be added to case report anonymously

A chalkboard with the word "FEEDBACK" written in large, white, hand-drawn chalk letters. The letters are filled with diagonal hatching lines.

Step 7– Collect Images



Images



Obtain ahead of time or you may lose access

- Photos / possibly with ruler – before/after, x-rays, CT, PET, MRI, pathology slides, etc.
- Images must be cropped and meet minimum resolution for publication
- Remove patient identifiers



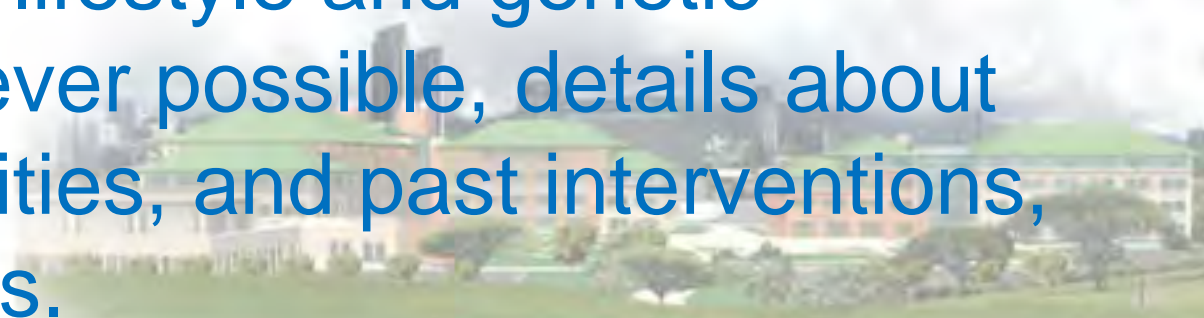
Step 8 – Collect Medical Record



5. Patient information section

CARE Checklist description:

- 5a - Demographic information of the patient (age, gender, ethnicity, occupation).
- 5b - Main symptoms of the patient (chief complaint).
- 5c - Medical, family, and psychosocial history—including lifestyle and genetic information whenever possible, details about relevant comorbidities, and past interventions, and their outcomes.





Writing – Follow CARE Outline

Gagnier JJ. BMJ Case Reports, 2013

A group of clinicians, researchers, and journal editors developed reporting guidelines for case reports

- CARE Outline - <https://www.care-statement.org/checklist>
- Include CARE Checklist below with article submission
<https://static1.squarespace.com/static/5db7b349364ff063a6c58ab8/t/5db7bf175f8695812fd4293/1572323098501/CARE-checklist-English-2013.pdf>
- Writing a Case Report - <https://www.care-statement.org/writing-a-case-report>
Very good step by step directions at
[https://www.jclinepi.com/article/S0895-4356\(17\)30037-9/fulltext](https://www.jclinepi.com/article/S0895-4356(17)30037-9/fulltext)
- More writing assistance at <https://www.equator-network.org/>
- See examples at <https://www.care-statement.org/publications>

Writing – Start with Outline



Outline Headers vary depending on journal or author

- Title (use key words)
- Abstract
- Introduction
- Case Presentation (Patient Info, Clinical findings via timeline, Diagnosis, Treatment, Outcomes)
- Discussion
- Conclusion (take-home message)
- References

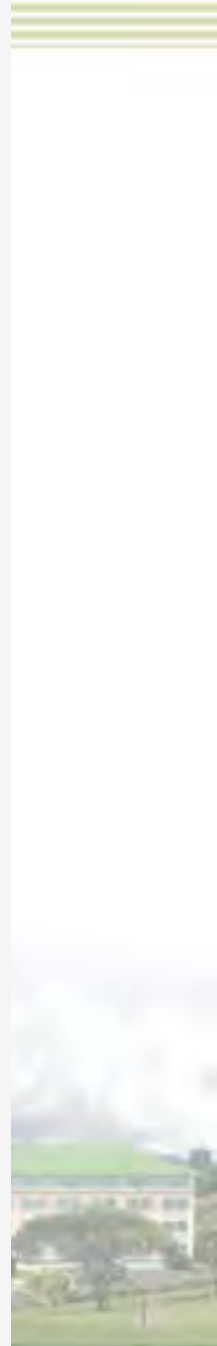




2013 CARE Checklist

<https://www.care-statement.org/checklist>

1. **Title** – The diagnosis or intervention of primary focus followed by the words “case report”.
2. **Key Words** – 2 to 5 key words that identify diagnoses or interventions in this case report (including "case report").
3. **Abstract** – (structured or unstructured)
 - Introduction – What is unique about this case and what does it add to the scientific literature?
 - The patient’s main concerns and important clinical findings.
 - The primary diagnoses, interventions, and outcomes.
 - Conclusion – What are one or more “take-away” lessons from this case report?
4. **Introduction** – Briefly summarizes why this case is unique and may include medical literature references.





5. Patient Information **Case Presentation**

- De-identified patient specific information.
- Primary concerns and symptoms of the patient.
- Medical, family, and psychosocial history including relevant genetic information.
- Relevant past interventions and their outcomes.

6. Clinical Findings – Describe significant physical examination (PE) and important clinical findings.

7. Timeline – Historical and current information from this episode of care organized as a timeline (figure or table).

8. Diagnostic Assessment

- Diagnostic methods (PE, laboratory testing, imaging, surveys).
- Diagnostic challenges.
- Diagnosis (including other diagnoses considered).
- Prognostic characteristics when applicable.



9. Therapeutic Intervention

Case Presentation

- Types of therapeutic intervention (pharmacologic, surgical, preventive).
- Administration of therapeutic intervention (dosage, strength, duration).
- Changes in therapeutic interventions with explanations.

10. Follow-up and Outcomes

- Clinician- and patient-assessed outcomes if available.
- Important follow-up diagnostic and other test results.
- Intervention adherence and tolerability. (How was this assessed?)
- Adverse and unanticipated events.

11. Discussion

- Strengths and limitations in your approach to this case.
- Discussion of the relevant medical literature.
- The rationale for your conclusions.
- The primary “take-away” lessons from this case report (without references) in a one paragraph conclusion.

12. Patient Perspective – The patient should share their perspective on the treatment(s) they received.

13. Informed Consent – The patient should give informed consent. (Provide if requested.)

The CARE checklist (and writing outline) have been translated into multiple languages. Visit [SWIHM](https://www.care-statement.org) to access these translations.

<https://www.care-statement.org/checklist>

CARE Instructions



Step by step instructions with examples can be found at: [https://www.jclinepi.com/article/S0895-4356\(17\)30037-9/fulltext](https://www.jclinepi.com/article/S0895-4356(17)30037-9/fulltext)



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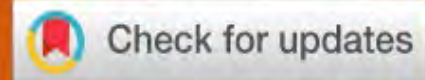
ORIGINAL ARTICLE | VOLUME 89, P218-235, SEPTEMBER 01, 2017

CARE guidelines for case reports: explanation and elaboration document

[David S. Riley](#) • [Melissa S. Barber](#) • [Gunver S. Kienle](#) • ... [Marietta Kaszkin-Bettag](#) • [James E. Carpenter](#) •

[Joel J. Gagnier](#) • [Show all authors](#)

Published: May 18, 2017 • DOI: <https://doi.org/10.1016/j.jclinepi.2017.04.026>



Title



- Use PubMed key words in title so case report is easy to find
 - # of downloads are based on quality of title
 - Catchy titles hard to find or decipher
- Add “Case Report, Case Study, or Case Series

Examples

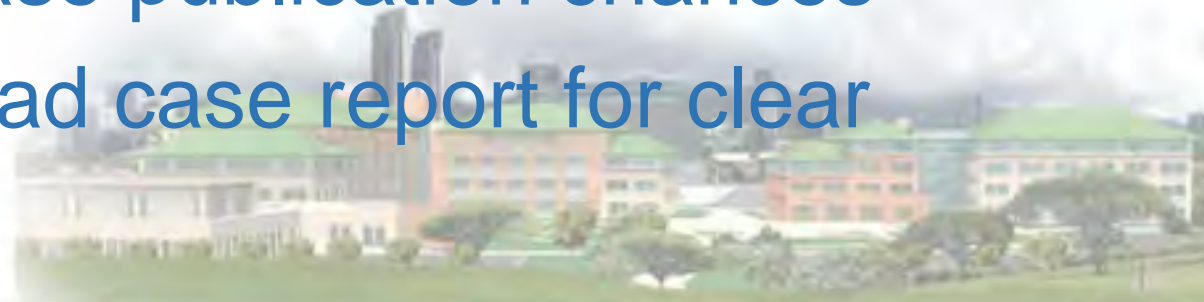
- Giant renal angiomyolipoma: A case report. Urol Case Rep
- Management of panhypopituitarism during pregnancy: A case report. Case Rep Womens Health
- Silent septic arthritis: A case report. Cureus
- Uterine lipoma: A case report. Case Rep Womens Health



Authors



- Maximum number of authors determined by “Author’s Guidelines” (about 4)
- Have all authors submit copyright release with submission of article (use journal’s form)
 - difficult to obtain later in a timely fashion
 - acceptance to publication time is often very short
- If student, a faculty member is often essential for mentoring, editing, and using institutional letterhead to increase publication chances
- Have lay people read case report for clear understanding



Abstract



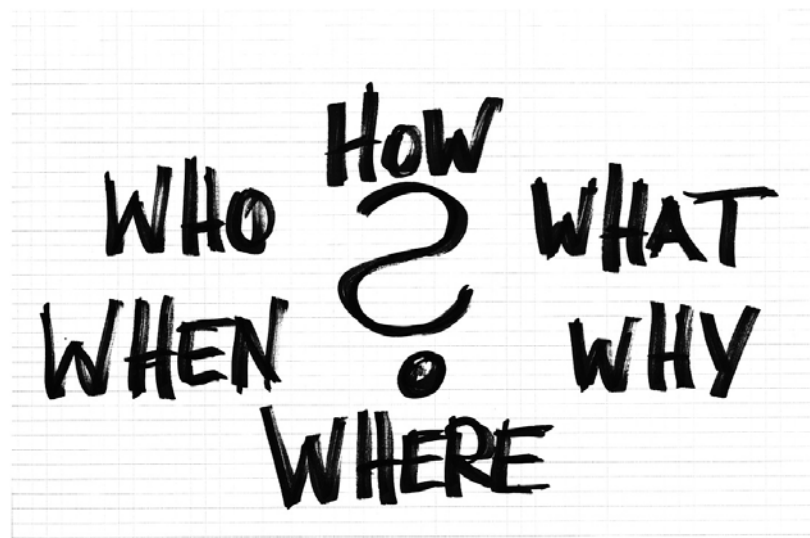
- 150-300 word limit (check “Author’s Guidelines”)
- Written last (no references)
- Introduction (why is case unique and how does it add to the literature)
- Case presentation – patient’s chief complaints, clinical findings, diagnosis, interventions, & outcomes
- Conclusion - Take-home message helping practitioners
- 2-5 Key words are KEY to others finding case





Introduction or Background

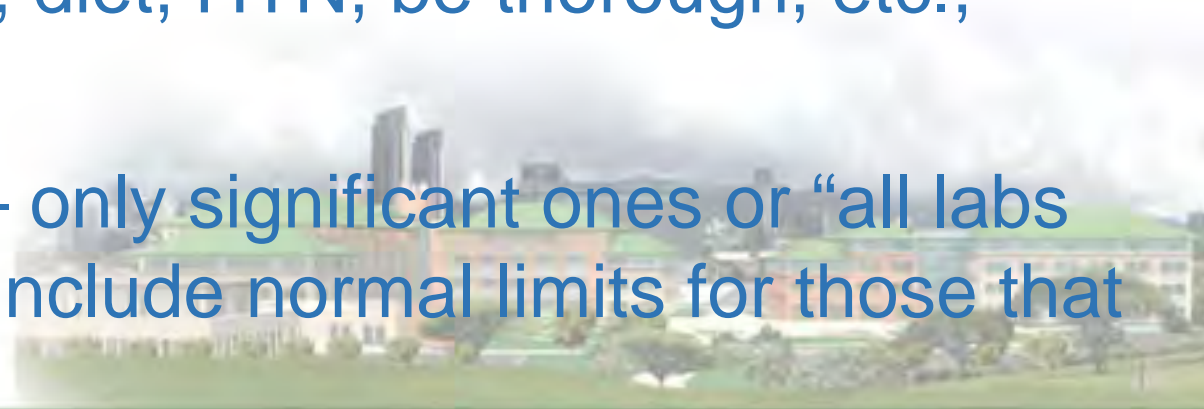
- Search for similar case reports
- Brief background summary citing the relevant medical literature
- Explain “why” case may have happened



Case Presentation



- Describe Patient – age, race, gender, height, weight, occupation with “major complaint(s)”
- Clinical Findings – chief complaint, possible interfering factors, alternative causes and/or contributors (check all drugs)
- Medical History if applicable to case – relevant past interventions, comorbidities, genetics, drugs, recreational drugs, OTC, allergies, diet, HTN, be thorough, etc.,
- Laboratory Findings – only significant ones or “all labs within normal limits” (include normal limits for those that are not)



Adverse Drug Event or Reaction (ADE / ADR)



Drugs/Recreational/OTC/Dietary supplements/etc.

- Dose, dosage (amount, frequency), duration
- **OFTEN OMITTED**
 - Route (oral, topical, subcutaneous, etc. see long list under drop down menu in box on FDA 5300 form)
 - Source (**brand, manufacture, lot#**)
 - Start and end dates for previous 3 months
 - Drug serum levels if applicable (total and free levels)
 - Any challenge and rechallenge that serves as the gold standard for adverse drug events (reactions)
 - Compliance

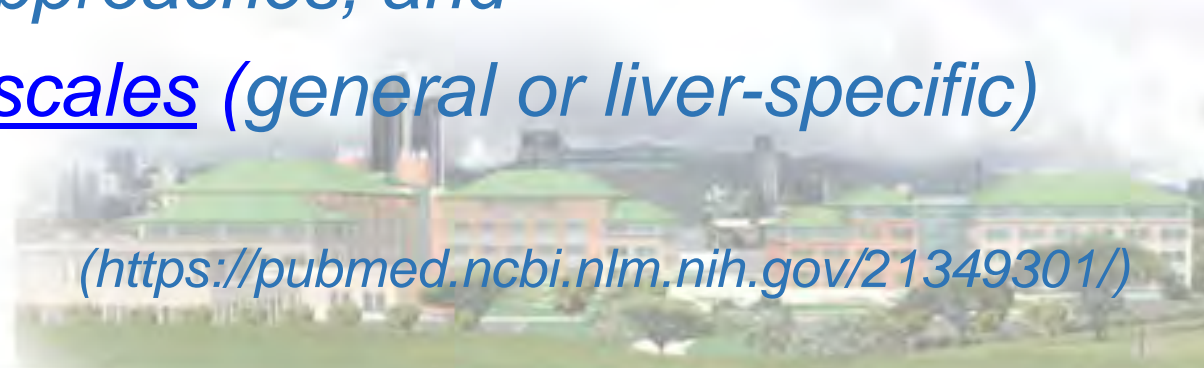


ADE/ADR - Use Appropriate Validated Causality Scale



- *“Diagnosis of drug-induced liver injury (DILI) remains a challenge and ...awaits the development of reliable hepatotoxicity biomarkers.*
- *Until then... hepatotoxicity causality assessments are ... divided into three categories:*
 - (1) expert judgement*
 - (2) probabilistic approaches, and*
 - (3) algorithms or scales (general or liver-specific)*

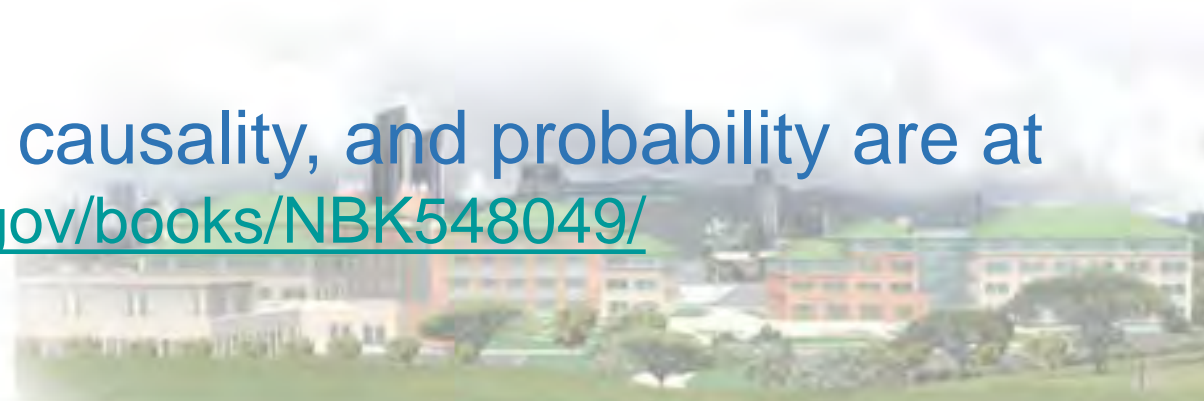
(<https://pubmed.ncbi.nlm.nih.gov/21349301/>)



ADE/ADR - Use Appropriate Validated Causality Scale



- Not Specific to Liver Injury
 - Naranjo Probability Scale can be used for any type of adverse drug reaction.”
- Drug Induced Liver Injury
 - Roussel Uclaf Causality Assessment Method (RUCAM)
 - Maria and Victorino (M & V) System (Modification of RUCAM)
- Explanation of scales, causality, and probability are at <https://www.ncbi.nlm.nih.gov/books/NBK548049/>



Fill out ADE/ADR Forms



- **Forms help with making sure details are included**
- **Institution's Form** – many public or private companies have their own form
- **FDA's Form 3500** found at file:///C:/Users/Amy/Downloads/FDA-3500_Stat_Sec_Ext_07-06-2022_0.pdf
- **Instructions** for filling out FDA Form 3500 <https://www.fda.gov/safety/medwatch-forms-fda-safety-reporting/instructions-completing-form-fda-3500>

Discussion



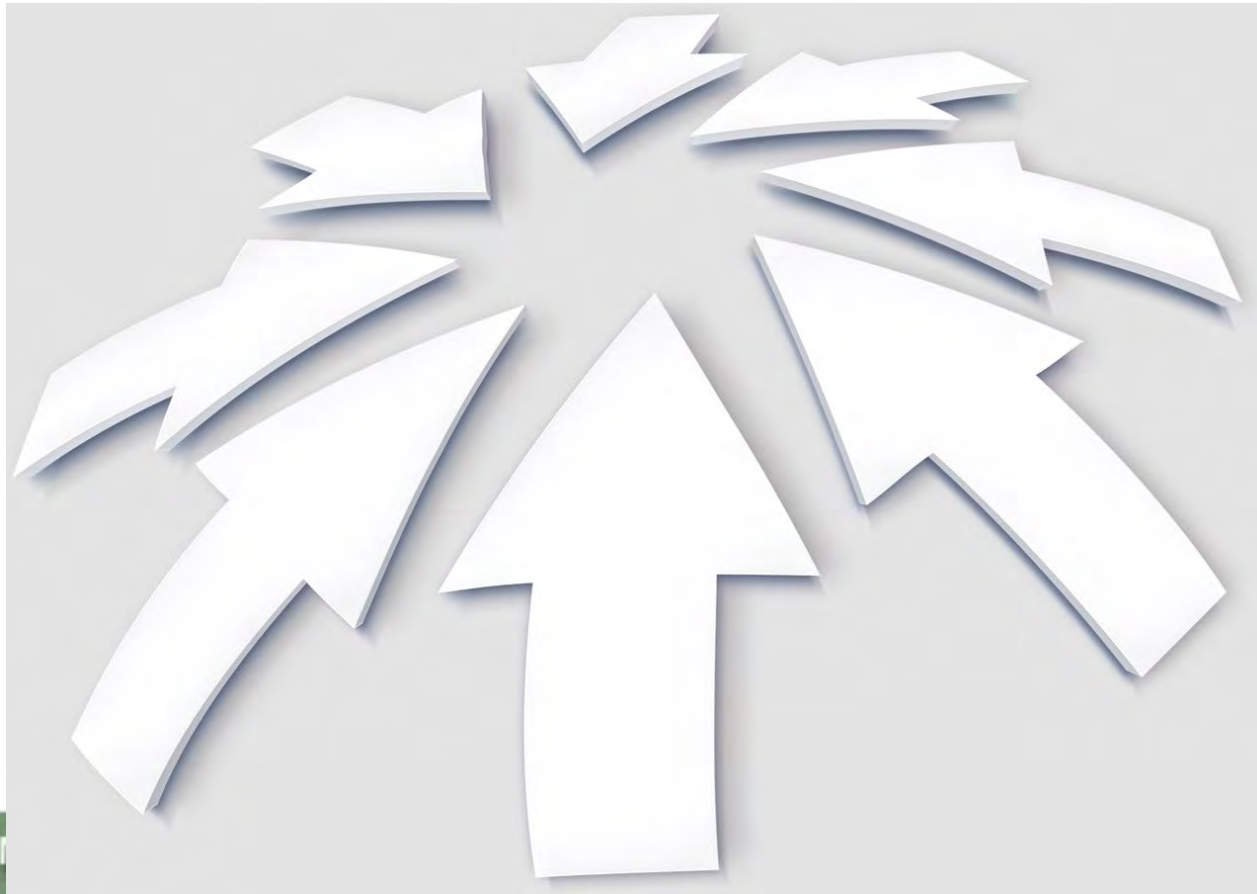
- Compare and contrast this case report with other case reports and relevant medical literature (pull the most important or hard to find literature)
- Limitations of managing this case



Conclusion



- What's the take-home teaching point in one sentence?
- One short paragraph without references at the end of the article





Acknowledgements, Conflict of Interest, Ethics

End of article is followed by:

- Acknowledgements – assistance and funding
- Conflict of Interest - “The authors declare no existing conflicts of interest.”
- Human Ethics - Consent was obtained by all participants in this study (or usually inserted in case description section after patient description)

References



- Only use primary peer reviewed references in the scientific literature (PubMed)
- Unethical to transfer unread cited references submission to Journal
- You may first query editor to ask if case title (& or abstract) is of interest



How to Submit to a Journal



- Online submission under institution's employee (student can be first author)
- Cover letter on letterhead

A screenshot of a journal submission site login page. The page has a light green background. At the top left, there is a decorative pattern of repeating 'U' characters. The main content area is a white box with rounded corners. Inside, the text 'Log In' is displayed in a large, dark font. Below it, there are two input fields: 'User ID' and 'Password'. To the right of the 'User ID' field is a blue link 'Create an Account'. To the right of the 'Password' field is a blue link 'Reset Password'. Below the 'Password' field is a small eye icon. At the bottom left of the white box is a blue 'Log In' button. At the bottom center is a button with a green 'ID' icon and the text 'Log In With ORCID iD'.

Log In

User ID [Create an Account](#)

Password [Reset Password](#)

[Log In](#)

Log In With ORCID iD

Welcome to the submission site for

BMJ Case Reports

To begin, log in with your user ID and password.

If you are unsure about whether or not you have an account, or have forgotten your password, go to the [Reset Password](#) screen.

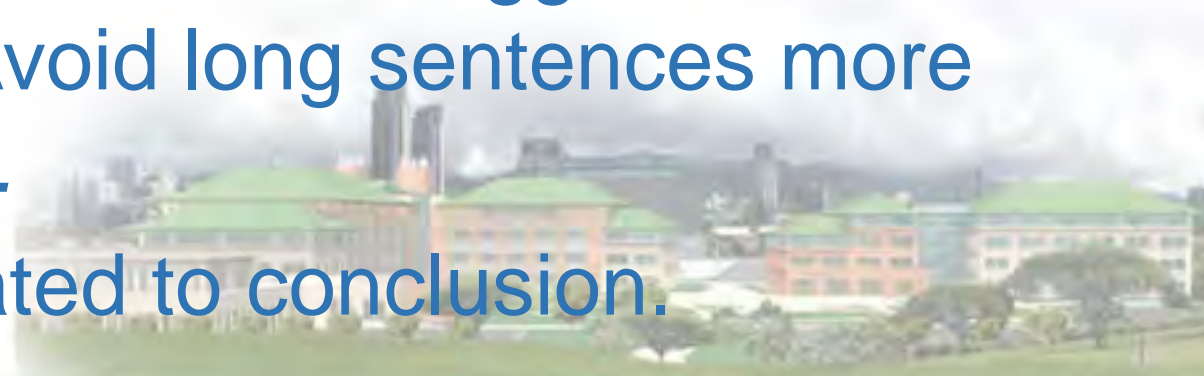
If you have previously created multiple accounts with different user IDs, for example by signing up a second time with a different email address, please contact the [Editorial Office](#)



Writing Tips & Pointers



- Goal - Interesting, clear & concise
- Follow journal's style, especially referencing style
- Written in past tense (he, she, him, her, its, they, them)
- Never use I, me, we, our, you, your
- Abbreviations spelled out the first time; and always abbr thereafter
- Focus only on the essentials. Biggest mistake is writing too much. Avoid long sentences more than *two lines long*.
- Exclude info unrelated to conclusion.



Writing Tips & Pointers



Edit repeatedly (3-4 times) for:

- 1) Linear flow of thought
 - 2) Content accuracy
 - 3) Removing repetition and fluff (filler)
 - 4) Ensuring paragraphs have a) topic sentence, b) body, c) conclusion followed by d) transition sentence (avoids 'jumping')
- Engage reader with energetic tempo
 - Spell check (many authors don't)!
 - Avoid group think
 - Stay true to scientific objectivity



Peer Review



- Editor decides to accept, accept with minor or major modifications, or reject
- Original research articles take 4-6 weeks or up to 3 months, but usually shorter for case reports.
- 2 week mark – ask if they received or went out for review
- Respond to ALL reviewer comments point-by-point.
 - Use track-changes, comment boxes, and sticky notes
 - Or traditional method of listing comment #, page, line, comment and your response.
 - A very clear method is to add, “Change “X” to “Y.”
- Stay professional, never be offended – comments make your paper stronger so thank reviewers and or editor
- Double check proofs that all edits are correct

Publication



- **Congratulations!** author!



- Add published paper to your profile in <https://www.researchgate.net/> (tracks downloads) or similar academic research site sharing publications
- Info at <https://en.wikipedia.org/wiki/ResearchGate>



Questions?



Thank you!



Contact AmyBrown@Hawaii.edu

