

# Writing MPOG Research For Academic Journals

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# Overview

- “Rightsizing” the paper
- Pick the right journal
- There are right and wrong ways to report a paper
- What is the purpose of a peer-reviewed manuscript?
- It’s your baby, but not everyone thinks it is cute
- Put yourself in the reviewer and editor’s shoes

# The purpose of peer-reviewed manuscripts

- Disseminate knowledge
- Clinical impact – people changing their daily clinical decisions
- Scientific impact – people changing how they advance science
- Share your failures and successes
- Helping catalyze the journey toward definitive evidence

# Scientific writing

- Many resources for writing in general

## Preparing Manuscripts for Submission to Medical Journals: The Paper Trail

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### SELECTED TOPICS

**H. GILBERT WELCH, MD, MPH**

*Editor*

*Effective Clinical Practice.*  
1999;2:131–137.

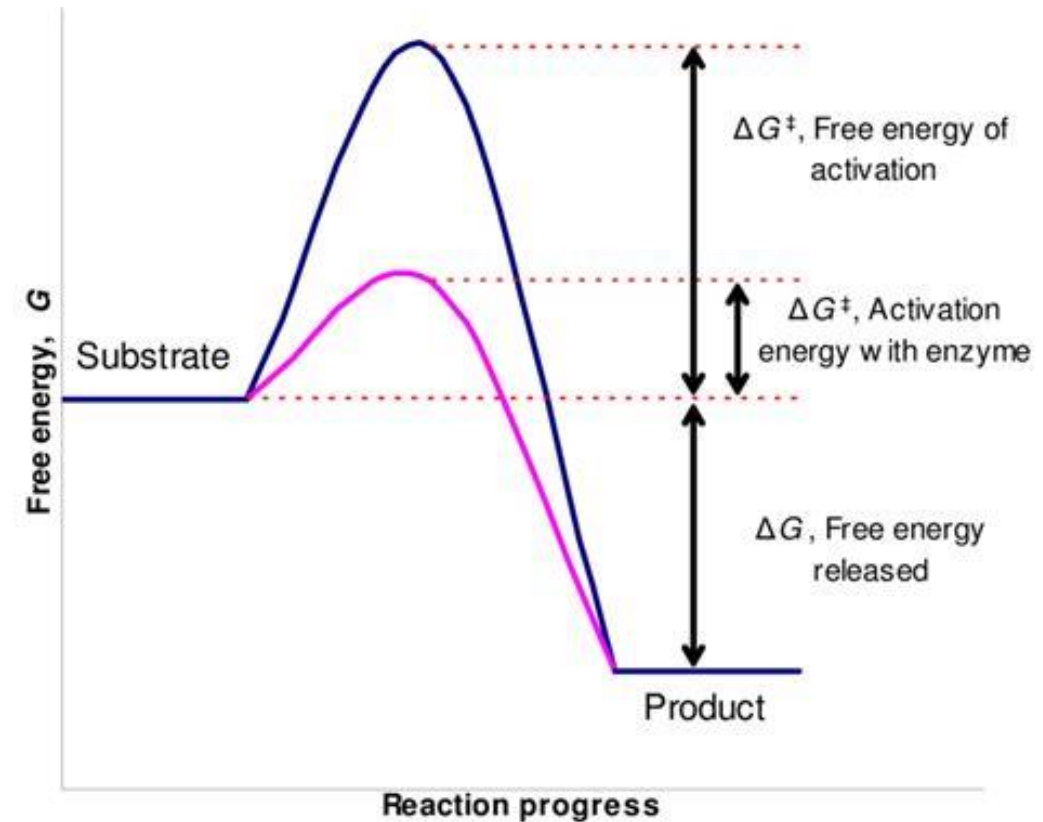
- [https://www.medicine.umich.edu/sites/default/files/content/downloads/WritingResearchPaper\\_Ibrahim\\_0.pdf](https://www.medicine.umich.edu/sites/default/files/content/downloads/WritingResearchPaper_Ibrahim_0.pdf)

# Successful history of MPOG manuscripts

Title					
	Practice patterns and variability in intraoperative opioid utilization: A report from the multicenter perioperative outcomes group	Naik BI	Pace NL	Anesth Analg	2021
Prolonged Opioid Use and Pain Outcome And Association Under General Anesthesia: A Prospective Cohort	Variation in propofol induction doses administered to surgical patients over age 65	Schonberger SB	Shah N	J Am Geriatr Soc	2021
Postoperative acute kidney injury by age and sex: association study	A lower tidal volume regimen during one-lung ventilation for lung resection surgery is not associated with reduced postoperative pulmonary complications	Colquhoun DA	Blank RS	Anesthesiology	2021
Intraoperative Use of Albumin in Major non-cardiac and Association with Outcomes	Utilization patterns of perioperative neuromuscular blockade reversal in the United States: A retrospective observational study from the multicenter perioperative outcomes group	Dubovoy TZ	Vaughn MT	Anesth Analg	2020
Oxygen administration during surgery and postoperative observational cohort study	Sugammadex versus neostigmine for reversal of neuromuscular blockade and postoperative pulmonary complications (STRONGER): A multicenter matched cohort analysis	Kheterpal S	Saager L	Anesthesiology	2020
Multicentre analysis of practice patterns regarding surgery	The incidence of intraoperative hypotension in moderate to high risk patients undergoing non-cardiac surgery: A retrospective multicenter observational analysis	Shah NJ	Kheterpal S	J Clinical Anesthesia	2020
Association of Anesthesiologist Staffing Ratio With and Mortality	Risk factors for intraoperative hypoglycemia in children: A Multicenter Retrospective Cohort Study	Riegger LQ	Malviya S	Anesth Analg	2020
Association between the choice of reversal agent and postoperative pulmonary complications in patients undergoing non-emergency surgery: STIL-STRONGER, a multicenter	Multicenter perioperative outcomes group enhanced observation study postoperative pain profiles, analgesic use, and transition to chronic pain and excessive prolonged opioid use patterns methodology	Stuart AR	Durieux ME	Anesth Analg	2020
Assessment of Perioperative Outcomes Among Patients 5 Night Before	Considerations for Integration of Perioperative Electronic Health Records Across Institutions for Research and Quality Improvement: The Approach Taken by the Multicenter Perioperative Outcomes Group	Colquhoun DA	Mathis MR	Anesth Analg	2020
Frequency and risk factors for difficult Intubation anesthesia for cesarean delivery: A multicenter retrospective	Classification of current procedural terminology codes from electronic health record data using machine learning	Burns ML	Saager L	Anesthesiology	2020
Adherence to guidelines for the administration of sedation Nationwide US sample	Perioperative risk and the association between hypotension and postoperative acute kidney injury	Mathis MR	Wedeven C	Anesthesiology	2020
Hypoxemia in young children undergoing one-lung cohort study					
Outcomes of surgical patients during the first week at hospitals					

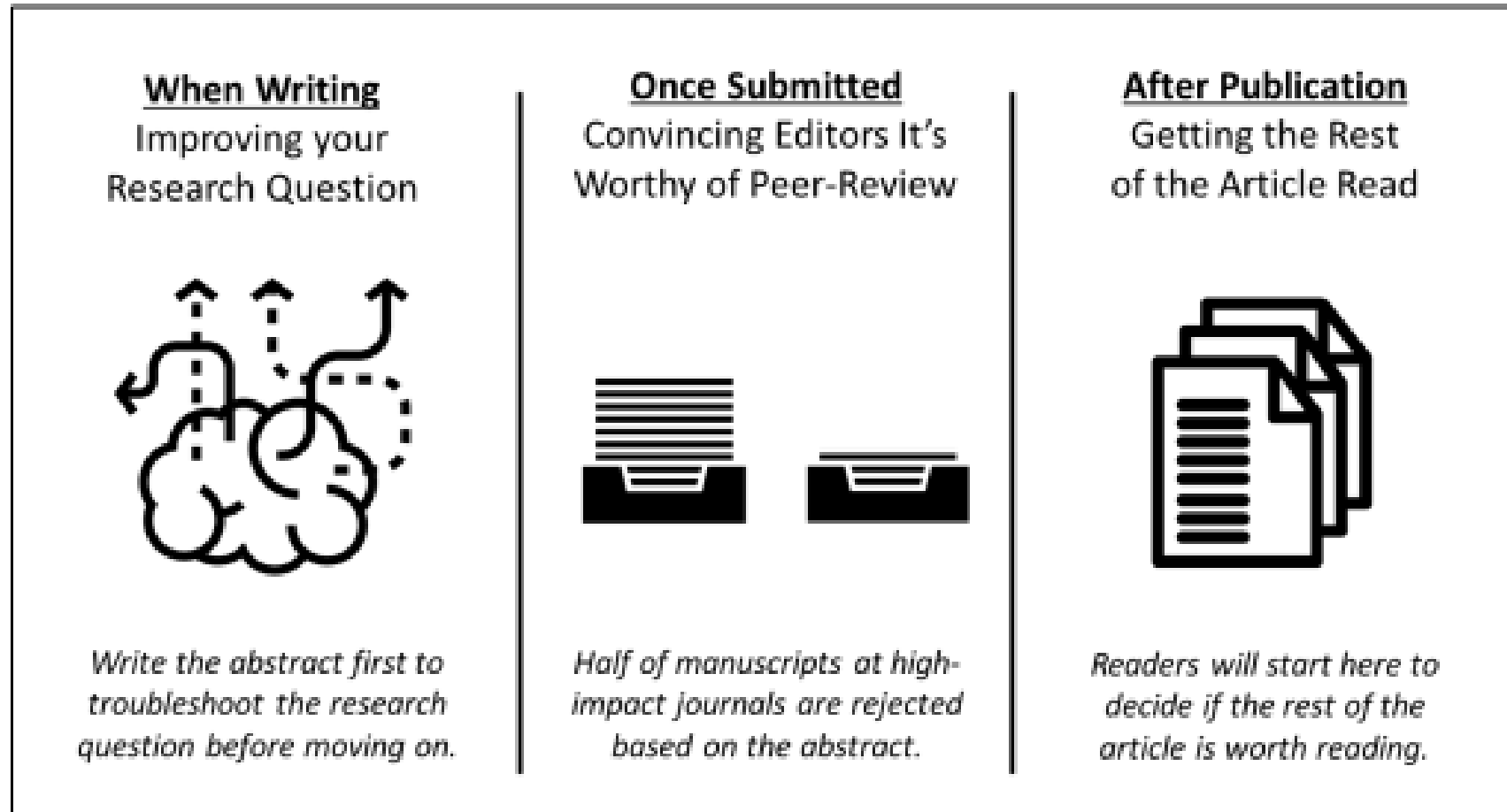
# Rightsizing the paper

- Typically, one “proposal” -> one manuscript
- Diffuse proposals and hypotheses lead to unfocused manuscripts
- Paper must be “big” enough to warrant reading it, the “energy of activation”
- More messages, more complexity increase the energy of activation
- Novelty, focus, and “buzz” decrease energy of activation
- Paper must be “small” enough to be consumable and have a clear message (or two)



# Write the abstract FIRST

**Figure 1.** The Three Roles of an Abstract Across the Manuscript Timeline



Credit:  
Ibrahim and  
Dimick

## Picking the right journal





# Picking the right journal

- Impact factor is *\*not\** the right first step
- The audience is the first question
  - Who needs to read this manuscript?
  - Who has a clinical or scientific action as a result of this manuscript?
  - Anesthesiologists only?
  - Surgeons, administrators, general medical, informatics folks?
- Is that journal “friendly” to the proposed methodology?
  - NEJM & Lancet
    - Clinical trials for causal inference
    - Policy changing epidemiology
  - JAMA, BMJ are friendly to observational manuscript causal inference
- Getting it published is the #1 goal, where it gets published is about impact and ego

# Picking the right journal

- Among a specialty/audience journal family, there are other considerations
- Impact factor  $\neq$  early reach & impact
  - Social media activity of the journal, press releases (local and journal)

# Reporting

- Pick an EQUATOR checklist
  - <https://www.equator-network.org/> & <https://www.goodreports.org/>
  - Use it when designing the protocol
- If there is a better checklist for a novel methodology (machine learning, etc), highlight it
  - <https://www.ahajournals.org/doi/10.1161/CIRCOUTCOMES.120.006556>
- STROBE is not enough anymore
  - RECORD, SQUIRE, etc

# Reporting

- Err on the side of transparency
- Review recently published work in that journal to see where other authors wound up
- Review the instructions for authors – they change frequently
- Word limits are just that – a MAXIMUM, not a goal
- A great read:



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## Commentary

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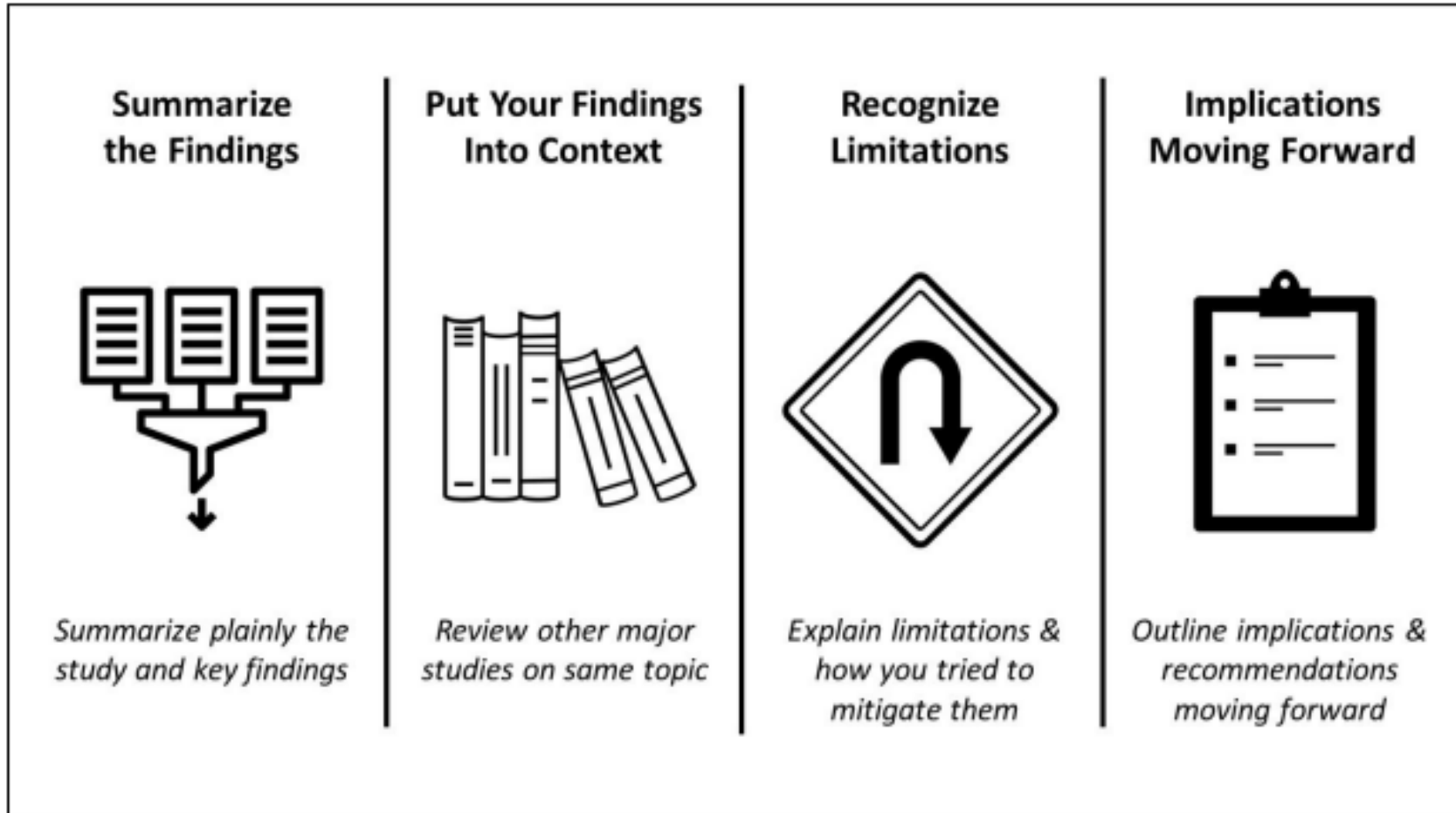
### The Table 2 Fallacy: Presenting and Interpreting Confounder and Modifier Coefficients

## MPOG specific guidance

- When reporting a paper, sample size is your enemy, not your friend
- Do **\*NOT\*** highlight how many cases are in MPOG that you “started” with; readers question generalizability
- Statistical significance is a burden
- Effect sizes are the key
- MPOG data is no longer restricted to “academic medical centers”
- Model parsimony builds upon hypothesis focus
- Use supplemental digital content freely for model reporting

# Discussion

**Figure 3.** Four Components of a Compelling Discussion



Credit:  
Ibrahim and  
Dimick

# Discussion

- The place where most causal inference MPOG papers struggle
- Focus on the data in this manuscript
- Take ONE step from the data for interpretation
- Objectivity is hard, but essential
- Don't oversell, let the reviewers do that
- Highlight limitations so that reviewers aren't inspired to