

Presenting yourself and your research.

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Getting to the Finish Line: How to get your article published.

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Disclosure:

I *do not* have any affiliation (financial or otherwise) with a commercial organization that may have a direct or indirect connection to the content of this presentation.

Outline

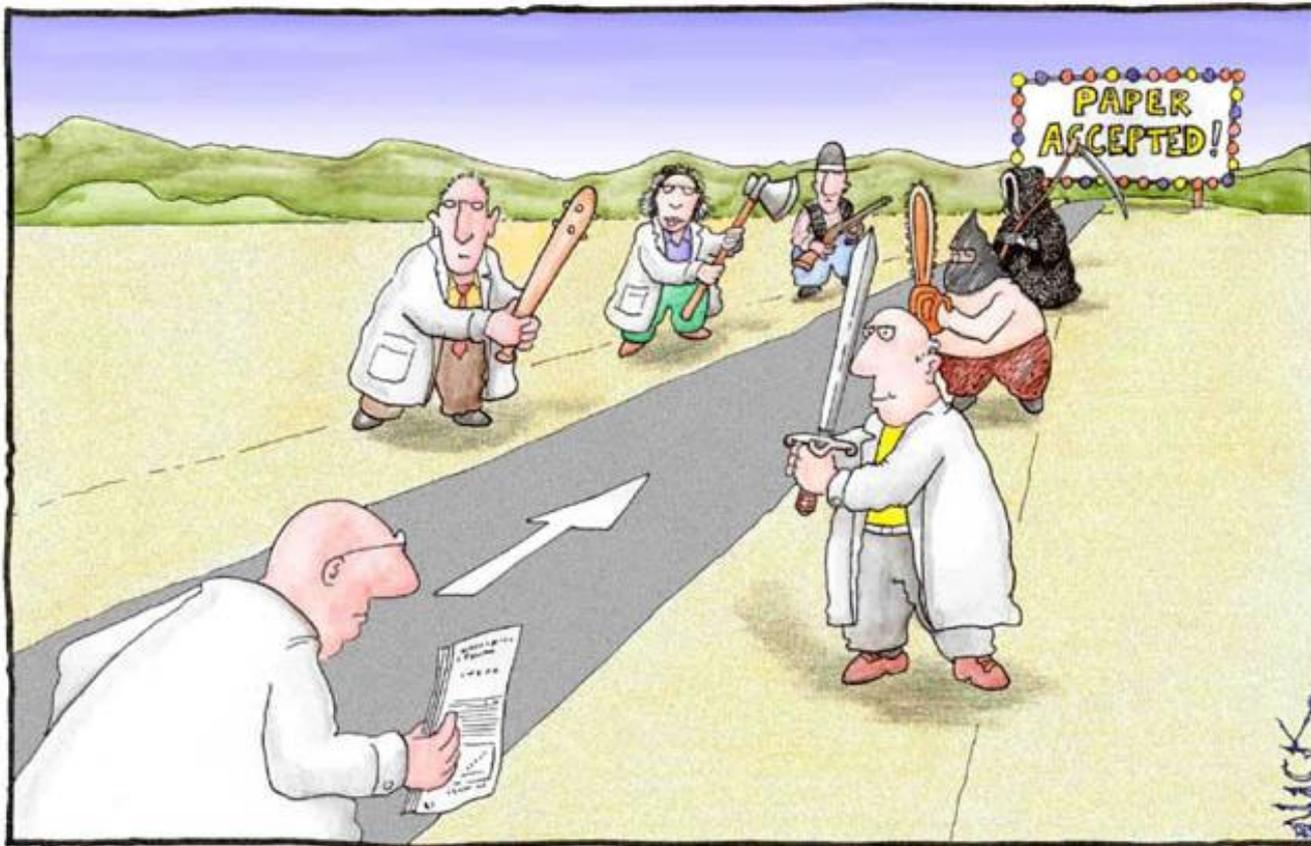
- Why to publish.
- The Top 10 rules
 - Examples;
 - Quotes from experts.
- Summary.



Preparation for today

- Searched the literature for information.
- Searched for other literature (strangely, mostly in basic science/pathology journals).
- Asked colleagues and mentors (quotes).
- **Most importantly:** Edited 2 papers this weekend to remind myself what is important!
- What did I find?

This is how it often feels



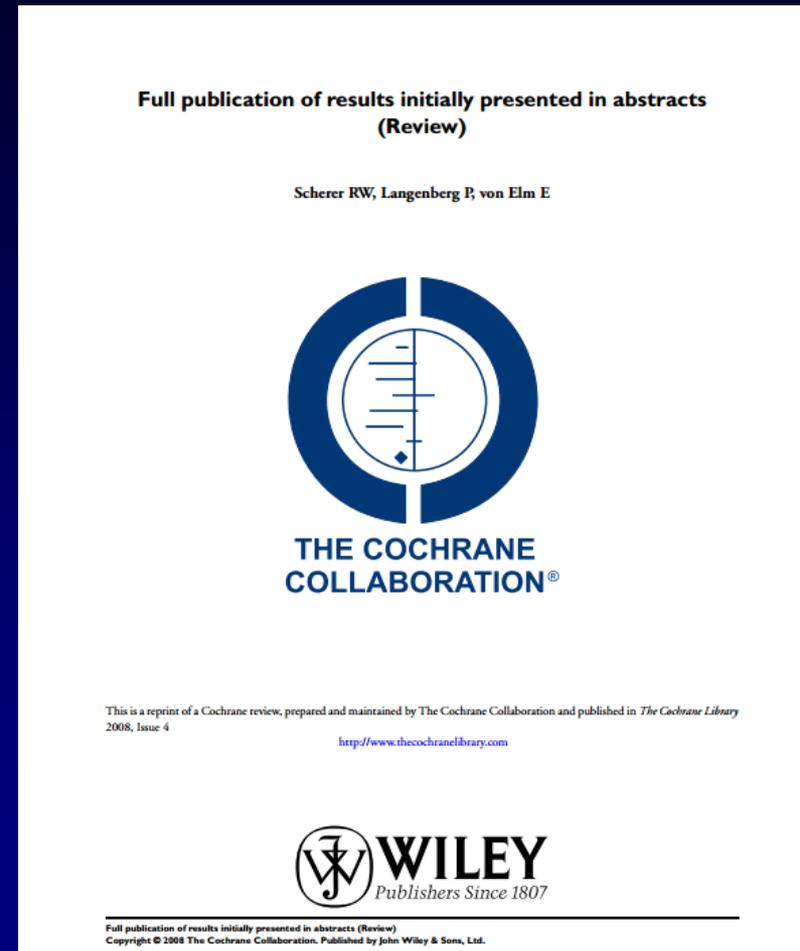
Most scientists regarded the new streamlined peer-review process as 'quite an improvement.'

Publishing Research

Why is it so important, and especially
in your early career?

The evidence for RCTs

- Outcomes of RCTs at conferences show infrequent publication;
- Systematic review of these studies: 79 reports (29,729 abstracts);
- Publications: weighted mean publication rate of 44% (95% CI; 44, 45).



Scherer RW, et al. CDSR. 2007 Apr 18;(2):MR000005

Reasons for non-publication

- Survey of authors from the SPR meeting: 114 (43%) of 393 RCT authors responded.
- The majority (83%) of unpublished RCTs were never submitted for publication:
 - Non-significant results.
- Reasons for non-publication:
 - Not enough time (56.4% responded important or very important);
 - Trouble with coauthors (28.9%);
 - Journal unlikely to accept (26.3%).

Consequences of non-publication

- Publication bias:
 - Positive results get published faster and more frequently than negative results;
 - Influences the conduct of systematic reviews;
 - May lead to premature use or over-use of a test, procedure or therapy that is either ineffective or perhaps harmful (Choosing Wisely).
 - Limits your chance to achieve the penultimate academic goal: *promotion and tenure!*

*It is unethical to conduct research
and not publish it., there is simply
no good reason today to have this
result.*

Sir Ian Chalmers,
Cochrane Collaboration

10 Rules for Publishing Research

How to improve your success.

Rule 1

You can't beat quality!

My first RCT

- Sudbury, Ontario.
- Failed 4 funding attempts at EHSRAC.
- *Finally* funded by PSI.
- First Day: theft.
- Second Day: INCO.
- Result: first evidence that adding ICS to CS in acute asthma (and near divorce).

CARING FOR THE
CRITICALLY ILL PATIENT

Inhaled Budesonide in Addition to Oral Corticosteroids to Prevent Asthma Relapse Following Discharge From the Emergency Department A Randomized Controlled Trial

Brian H. Rowe, MD, MSc
Gary W. Bota, MD, FRCP
Lucio Fabrik, BSc Pharm
Sandra A. Therrien, MA
Ruth A. Milner, MA
John Jacono, PhD

Context: Relapses of acute asthma following emergency department (ED) discharge can be reduced with systemic corticosteroid treatment. However, whether inhaled corticosteroids (ICSs) provide additional benefit is not known.

Objective: To determine whether the addition of ICSs to oral corticosteroid treatment would reduce relapses in patients with acute asthma discharged from the ED.

Design and Setting: Placebo-controlled, double-blind, randomized clinical trial conducted in a community teaching hospital ED in Canada between November 1995 and September 1997, with a 21-day follow-up.

Participants: A total of 1006 consecutive patients aged 16 to 60 years presented to the ED with acute asthma; after excluding those using oral and/or inhaled corticosteroids as well as those meeting other exclusion criteria, 188 were included in the study.

Interventions: Patients were discharged with a nontapering course of oral prednisone (50 mg/d) for 7 days. In a double-blind fashion, patients were randomly assigned to 1600 µg/d of inhaled budesonide (n=94) or identical placebo (n=94) for 21 days.

Main Outcome Measures: Incidence of relapse, defined as an unscheduled visit for worsening asthma symptoms, in budesonide vs placebo groups. Secondary outcomes included response to the Asthma Quality of Life Questionnaire, β_2 -agonist use, symptom score, global asthma improvement assessment, and pulmonary function.

Results: Five patients in the budesonide group and 3 in the placebo group either dropped out or were lost to follow-up but were included in primary analyses. After 21 days, 12 (12.8%) of 94 patients in the budesonide group experienced a relapse compared with 23 (24.5%) of 94 in the placebo group, a 48% relapse reduction ($P = .049$). Asthma Quality of Life Questionnaire scores were higher (better quality) in the budesonide group ($P = .001$), as well as for all domain scores ($P = .001$ to $.01$). Fewer β_2 -agonist activations were used at the end of the trial by patients receiving budesonide (2.4/d vs 4.2/d; $P = .01$). Symptom scores ($P = .001$ to $.004$) and self-assessed asthma improvement scores (based on a 7-point Likert scale) (6.2 vs 5.2; $P < .001$) were higher (indicating fewer symptoms) for budesonide vs placebo. There were no differences in pulmonary function between the groups (peak expiratory flow rate: budesonide, 437 vs placebo, 453 L/min; $P = .39$) at 21 days. Using this approach, as few as 9 patients would require budesonide to prevent 1 relapse.

Conclusions: Patients discharged from the ED following treatment for acute asthma benefit from added treatment with high-dose inhaled budesonide for 21 days compared with oral corticosteroids alone.

JAMA. 1999;281:2119-2126

www.jama.com

See also Patient Page.

Author Affiliations and Corresponding Author and Reprints are listed at the end of this article.
Editor: Deborah J. Cook, MD, Consulting Editor.

JAMA. Advisory Board: David Bihari, MD; Christian Bruzzi, MD; Timothy Evans, MD; John Heffner, MD; Norman Parads, MD.

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JAMA, June 9, 1999—Vol 281, No. 22 2119

Quote

*Its hard to make a silk purse out of a
sow's ear.*

**Member of Editorial Board somewhere in
Canada**

Rule 2

Answer a clear *and* important question.

Deciding on a project

- PICO-D question format:
 - Population;
 - Intervention;
 - Control/Comparison;
 - Outcome;
 - Design.
- Select something you are passionate about.
- Focus on methods!
- Protocol and planning is important from the start, so write that well.



Quote

Read all you can find on your topic before you begin so you don't reinvent the wheel.

What will your study add to our understanding?

Arthur Kellerman,
Emory University, Atlanta, GA

Quote

Look for ideas that you think are likely to result in counter-intuitive findings. Editors love these.

Michael Schull, CEO ICES

University of Toronto, Toronto, ON

Rule 3

Play nice in the sand box!

Make some friends

- Collaborate with many! Examples:
 - *Librarians:*
 - Avoid repetition and read your “competition”.
 - *Statisticians:*
 - Sample size analysis;
 - Data analysis and presentation.
 - *Methodologists:*
 - Survey methods, outcome measurement, etc.
 - *Study coordinators:*
 - Experience.
 - *Clinicians:*
 - Relevance.

*To call in the statistician after the experiment is done may be no more than asking him to perform a post-mortem examination:
he/[she] may be able to say what the [study] died of.*

Sir Ronald Aylmer Fisher

Rule 4

Develop a publication “philosophy”.

Some of mine

- *Every paper has a home, its my [your] job to find that home.*
- *Aim high, you'll be surprised sometimes what happens.*
- *Always match the topic to the journal (don't be surprised by subtle mis-matches);*
- *When unsure: use your paper's reference list to decide where to submit.*
- *What's yours?*

Rule 5

Spend time preparing the document

Preparing a manuscript

- Read the ^%\$#@ *instructions to the authors* section (please!).
- Sit down to write when you have time and try to prepare a draft.
- Use a reference management program for your own sanity.
- Always get input from other authors (especially an experienced writer).
- Revise, revise, revise!

Common writing mistakes

- Spelling mistakes.
- Formatting errors.
- “Tense” confusion.
- Sentences that don’t make sense.
- Run on sentences.
- Saying too much and repeating yourself.

Common methods mistakes:

- Not fully describing methods.
- Statistics:
 - Not justifying sample size or providing power calculations;
 - Reporting only p-values;
 - Not performing appropriate and/or higher-level analyses.
- Writing “*there was a trend (p = 0.09)...*”
- Non-congruence of results and conclusions.
- Introducing new results in Discussion section.

My favourite quote in the world!

I wanted to write you something succinct, but I didn't have time. So I wrote you something verbose.

Rule 6

Learn the anatomy of a paper.

Writing

- If you don't write well and this will be part of your career, then get some training.
- Start writing the paper the day you have the idea of what questions to pursue.
- Some journals have a pre-submission enquiry system available—use it.

Cover Letter Quote

Pay attention to the cover letter - it needs to be polite, concise, and provide a really compelling reason why your paper is wonderful, important, and worthy of consideration by the journal.

Riyad Abu-Laban, UBC

Vancouver, BC

Components

- Title:
 - Pithy, tells a story.
- Abstract:
 - Critical, yet often neglected;
 - Don't end abstract with “more research needed”.
- Introduction:
 - Brief and leads into the paper;
 - Make sure the last paragraph of the introduction clearly outlines the study objectives.

Quote

A reviewer will make a decision on your paper within about 5 minutes based on the title, abstract and the objectives.

Former Editor (not of CMAJ)

Canada

Quote

Title and abstract far more important than the paper in terms of getting published – start with them, frame your paper around the abstract, and especially don't slap it together after the fact.

**Me2 Majumdar, University of Alberta
Edmonton, AB**

Components

- Methods and Results
- Funny thing: hardly anyone mentioned anything about these except they should be there!
- Try and mention one of the reporting guidelines in the methods.
 - MOOSE STROBE STAR-D
 - PRISMA DISCERN AGREE

Components

- Discussion:
 - What is your MAIN finding?
 - How does it fit into the literature?
- Limitations section:
 - Acknowledge your limitations clearly and explain why your paper is worthwhile despite them.
 - Don't try to hide flaws from reviewers or readers – it's a kiss of death.

Quote

Never go over the word limit.

Too long is too long; its usually a sign of drifting.

The 1950s Crick and Watson paper on the double helix - the basis of modern molecular biology and genomics – 2 pages!

**Don Yeally, University of Pittsburgh
Pittsburgh, PA**

Rule 7

Accept the decision, and work
with it!

Decision

- If they *accept “as is”*:
 - Be thankful and realize that is uncommon.
- If they say *revise and re-submit*:
 - Do what they ask (its accepted);
 - Do it quickly;
 - Do what they ask!
- If they say extensive revisions required:
 - If you can do it, then see points above;
 - If you can’t do it, move on to another journal.

How do editors decide?

- John Fletcher, former editor of CMAJ states that CMAJ used the **RIOT** criteria:
 - **R**elavant to readers
 - **I**important and or **I**nteresting to readers
 - **O**riginal: adding to what we know
 - **T**rue: methods and plausibility
- Also, main decision is made in less than 5 minutes.

Rule 8

Learn to deal with the worst-case
scenario

Rejection

- You need to develop a thick skin and you shouldn't take it personally.
- Don't give up (perhaps the most common flaw demonstrated by junior researchers).
- Take a break and then take the criticisms provided constructively.
- Some reviews are unfair – get over it.
- Remember, you are not alone (CMAJ accepts 7% of submitted research).

Relax/Chilax



Quotes

- *Given my track record of 6 rejections per accepted paper, I'm not sure I should be providing any advice at all....*
 - *Anonymous, Eastern Canada*
- *No doesn't always mean no, at least not in publication.*
 - Terry Klassen, University of Alberta
 - [Ian Stiell, University of Ottawa]

Rule 9

Learn along the way and improve.

Education

- At every stage of your career, its worthwhile to serve as a reviewer or on a Board for a journal(s).
- Why:
 - First, its your responsibility to the profession;
 - Second, its often very educational;
 - Third, you may be asked to write an editorial;
 - Fourth, try it, you may like it.

Rule 10

I've been rejected more often than a
pimpley teenager!

Re-emphasis

- Take your time:
 - Hastily-written papers often get rejected.
 - *Papers are like wine: they need time to mature.*
- Obtain feedback:
 - Get knowledgeable, critical mentors to read your papers and get useful feedback before submission;
 - **Write, re-write and re-write again!**

Summary quotes

- *Learn objectivity early, the editors and reviewers [already] have.*
 - Philip E. Bourne, PLoS
- *In the end, its worth it!*
 - Art Kellerman, Emory University, Atlanta



Thank you!

Questions?

