

How to Publish in an ISI- Indexed Journal

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*Finely crafted medical writing—
Because publication is the final stage of research*

**Publication
is the final stage of research**

What Journal Editors Want

**Manuscripts
prepared according
to the Instructions
for Authors!**

What Journal Editors Want

- Website of the **Mulford Library of the Medical College of Ohio, Toledo**; links to Instructions for Authors
- **Uniform Requirements for Manuscripts Submitted to Biomedical Journals (The Vancouver Style)**

What Journal Editors Want

- ***AMA Manual of Style***, American Medical Association
- ***Scientific Style and Format***, Council of Science Editors

What Journal Editors Want

Research that is:

New

True

Important

Clearly reported

Organization

The “IMRAD” Format

Introduction: Why did you start?

Methods: What did you do?

Results: What did you find?

Discussion: What does it mean?

Order of Sections in the Submitted Manuscript

Title Page

Abstract

Introduction

Methods

Results

Discussion

Acknowledgments

References

Tables

Figure Captions

Figures

General Writing Guidelines

- **First-person pronouns (I, we) are acceptable throughout the text**

“The authors decided . . .”

“We decided . . .”

General Writing Guidelines

- **Prefer the active voice but use the passive voice when appropriate (Methods section)**

“The nurse reviewed the histories . . .”

“The histories were reviewed . . .”

General Writing Guidelines

- **Use subheads within IMRAD format to make information easier to find**

Statistical Methods

Limitations of the Study

Conclusions

Title Page

Purpose

- **Identifies the manuscript as it moves through the journal's publication system**
- **Contains information about the manuscript needed for review**

- **Title**
- **Authors, degrees, institutions**
- **Previous presentations**
- **Financial sponsors**
- **Competing interests**
- **“Running head”(short title)**
- **Trial registration number**
- **Corresponding author’s name and contact information**
- **Key words**

Title

Purpose

- To help readers find and decide whether to read the full article
- To help readers NOT read the article if it will not be of interest

Titles

- **Most important part of the article**
 - **The part most often read**
 - **Often the only part read**
- **Must stand alone: no abbreviations**
- **Keep short**
- **Put important nouns first**

Setting (location)

Patients (what was studied)

Intervention (treatment)

Comparator (control group)

Endpoint (outcome of interest)

Design (study design)

Original

**A Randomized Trial of Low-Air-Loss
Beds for Treatment of Pressure Ulcers**

[72 characters and spaces]

Revised

**Low-Air-Loss Beds vs. Foam
Mattresses for Treating Pressure
Ulcers in Nursing Home Patients:
A Randomized Trial**

[111 characters and spaces]

**Low-Air-Loss Beds vs. Foam
Mattresses for Treating Pressure
Ulcers: A Randomized Trial**
[86 characters and spaces]

**Low-Air-Loss Beds vs. Foam
Mattresses for Treating Pressure
Ulcers**
[66 characters and spaces]

Subtitles can be Useful

A Cost-Benefit Analysis of Low-Air-Loss Beds vs. Foam Mattresses for Treating Pressure Ulcers in Nursing Home Patients

**Low-Air-Loss Beds vs. Foam Mattresses for Treating Pressure Ulcers in Nursing Home Patients:
A Cost-Benefit Analysis**

Subtitles can be Important

**Low-Air-Loss Beds vs. Foam
Mattresses for Treating Pressure
Ulcers in Nursing Home Patients:
A Cost-Benefit Analysis**

**Low-Air-Loss Beds vs. Foam
Mattresses for Treating Pressure
Ulcers in Nursing Home Patients:
A Systematic Review**

**Questions
on titles?**

Authorship

PURPOSE

- **To award credit where it is due**
- **To assign responsibility for the research**

Authorship

Authorship credit should be based only on:

1) substantial contributions to conception and design, or acquisition of data, or analysis and interpretation of data;

Authorship

2) drafting the article or revising it critically for important intellectual content;

3) final approval of the version to be published. . .

Authorship

Conditions 1, 2, and 3 must all be met.

Acquisition of funding, the collection of data, or general supervision of the research group, by themselves, do not justify authorship.

Uniform Requirements, ICMJE

Authorship

- **List authors in order of greatest contribution to the work, from most to least**
- **Do not allow guest (“gift”) authors**

Authorship

Do not allow guest authors:

A person named as an author but **who does not meet the criteria for authorship:**

- Senior researchers; directors
- Those referring patients
- Famous people

Authorship

Contributorship: identifying the contribution of each author to the research and its reporting

Guarantorship: naming one or two authors who personally and publicly guarantee the authenticity of the research and its report

Questions on authorship?

Abstract

PURPOSE

- To help readers find and decide whether to read the full article
- To help readers NOT read the article if it will not be of interest

Abstract

- **After the title, the second most important part of the article**
- **Often, the only other part read**

Abstract

Types

- **Descriptive** (indicative)
- **Informative** (IMRAD format)
- **Structured** (uses headings)

Abstract

- **Limit to one paragraph**
 - **usually 150 words for unstructured**
 - **usually 250 for structured**
- ***Must* stand alone: no abbreviations or citations to references, figures, or tables**

Introduction

Purpose

- **To establish the need for the study**
- **To establish the importance of the study**
- **Think of writing a four-part introduction**

Introduction

- 1. Background statement:** provides the context for understanding the problem and approach
- 2. Problem statement:** describes the nature, scope, severity, or importance of the problem that stimulated the research

Introduction

- 3. Task statement:** indicates the research question, hypothesis, approach, or activities undertaken to investigate the problem
- 4. Forecasting statement:** tells readers what they will find if they continue to read

Part 1: Background Statement

In patients with atherosclerotic vascular disease, aspirin is recommended to prevent myocardial infarction and graft occlusion.

Part 2: Problem Statement

However, aspirin is also associated with bleeding. Patients are often asked to stop taking aspirin before bronchoscopy, to reduce the risk of bleeding. The effectiveness of this practice has never been tested.

Part 3: Task Statement

Thus, we sought to determine whether aspirin really does increase the risk of bleeding after bronchoscopy.

Part 4: Forecasting Statement

. . . in which we compared the number and severity of bleeding events in those taking aspirin with those who were not *and determined that aspirin does not increase the risk of bleeding.*

Introduction

Problems

- **Weak background and problem statements**
- **Many authors assume, that readers will know 1) what the problem is and 2) why the research is important.**

Questions on introductions?

Methods

Purpose

- To permit readers to judge the validity of the study
- To permit others to replicate the study (nice thought, but . . .)

Methods

- **Assurance that the study was reviewed**
 - **Institutional review board (IRB)**
 - **Institutional Animal Care and Use Committee**

Methods

- **Study Design**
- **Variables (interventions; outcomes)**
- **Measurements**
- **Patients (eligibility criteria)**
- **Group Assignment**
- **Statistical Methods**

Study Designs

- **Retrospective (case-control) study**
- **Cross-sectional (survey) study**
- **Prospective (cohort) study**
- **Randomized controlled clinical trial (RCT)**

Variables

Explanatory variables; interventions

Response variables; outcomes

- Identify the **unit of analysis** (e.g., eyes, patients)
- Provide **measurable** definitions (hypertension, depression, Chinese-American)

Measurements

- ***Science is measurement!*** Report the who, what, when, where, and why
- **Precision, reliability, and validity of measurements**

Patients

- **Describe the population studied**
- **Give the eligibility criteria**
- **Give the dates of the data collection period**

Assignment

- **Case-control trials:** identify case definition and control recruitment
- **Cohort trials:** identify exposures or diagnoses of interest
- **Randomized trials:** report assignment process and nature of control group(s)

Assignment

Randomized Controlled Trials (RCT)

- **How patients were assigned to groups**
 - **Who made assignments**
 - **Source of random numbers**
 - **Allocation concealment**
 - **Blinding of treatment, data collection or interpretation, analysis**

Assignment Schedule

Number	Order	Group
136	1	Treatment
781	2	Control
093	3	Control
642	4	Treatment
234	5	Treatment

Statistical Methods

- **Identify the comparisons**
- **Say how sample size was determined**
- **Intention-to-treat vs. on-protocol analysis**
- **Specify the alpha level (e.g., 0.05; 0.01)**
- **Identify the statistical software package**

Treatment		Control
100	No. Assigned	100
40	No. Dropouts	10
60	No. Completed	90
40	No. Cured	40
40/60 66%	On-Protocol Analysis	40/90 44%
40/100 40%	Intent-to-Treat Analysis	40/100 40%

Questions on methods?

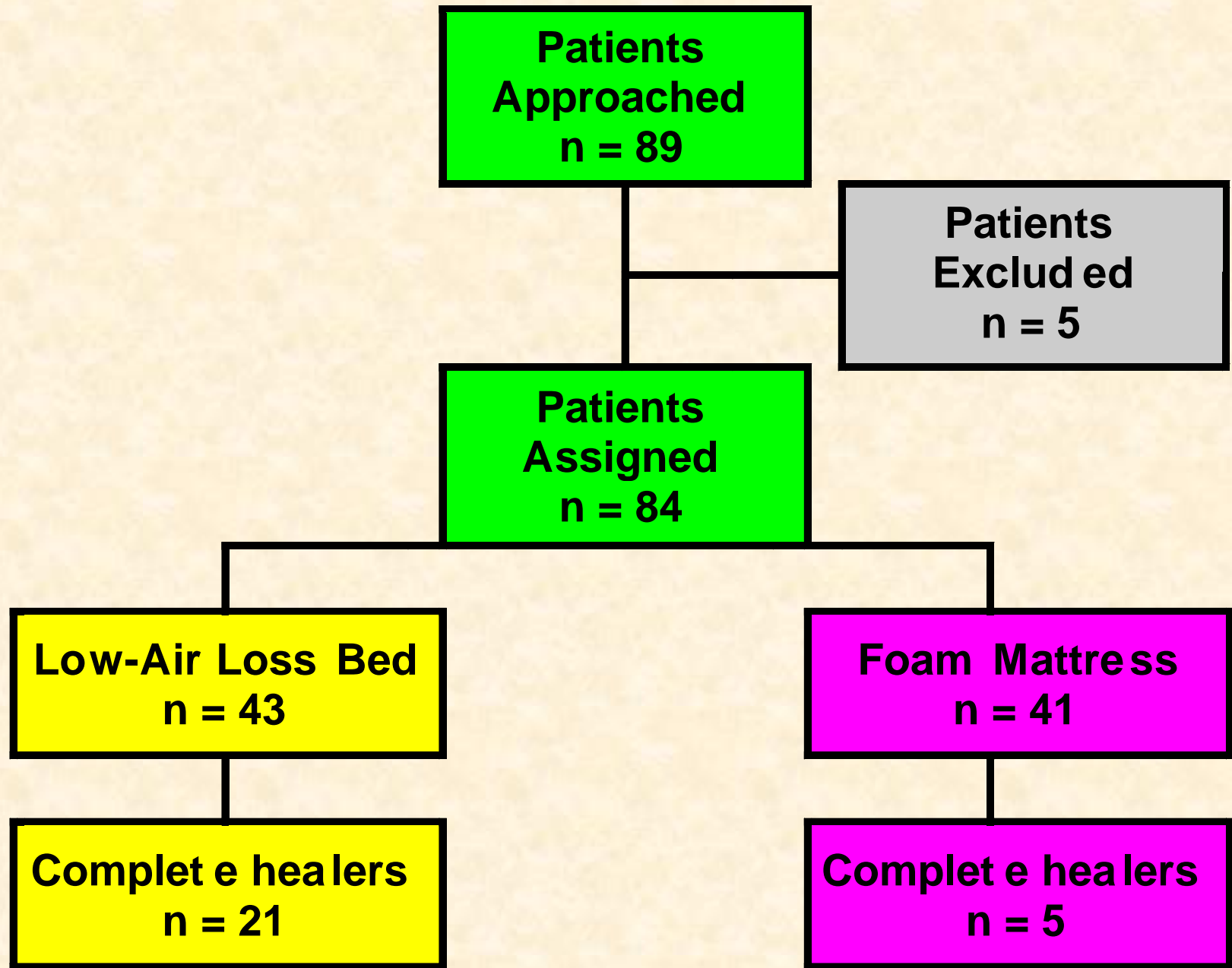
Results

Purpose

- **To tell what happened during the study**
- **To present the findings of the study**
- **Prefer figures to tables to text**
- **Explain any deviations from the study as planned**

Results

- **Provide a schematic summary of the study to:**
 - **Show the study design**
 - **Indicate the flow of subjects through the study**
 - **Account for all subjects or observations**



Results

- **Focus on the primary comparisons:**
 - **The actual change or difference between groups (the “estimated treatment effect”)**
 - **The 95% confidence interval**
 - **Exact P value (until $P < 0.001$)**
 - **The test used in the analysis**

Results

- **Assurance that the assumptions of the analysis were met**
 - **normally distributed data?**
 - **independent or paired data?**
 - **linear relationship?**

Questions on results?

Discussion (Comment)

Purpose

- **To explain the nature and importance of the findings**

Discussion

- 1. Summarize the study and the main results.**
- 2. Interpret the results and suggest an explanation for them**

Discussion

- 3. Describe how the results compare with what else is known about the problem; review the literature**
- 4. Suggest how the results might be generalized**

Discussion

- 5. Discuss the implications of the results**
- 6. State the limitations of the study**
- 7. *List* the conclusions**

Conclusions

We conclude that Tamoxifen reduced the incidence of DMH-induced colon cancer in rats. We also showed that DMH induced the expression of estrogen receptors in colonic mucosa, but that the number of estrogen receptors in the colonic mucosa was not correlated with blood levels of estradiol, polyamine, or ornithine decarboxylase. Finally, we found no relationship between blood levels of estradiol and tumor incidence.

Conclusions

In conclusion, we found that:

- **Tamoxifen reduced the incidence of DMH- induced colon cancer in rats.**
- **DMH stimulated the expression of estrogen receptors in colonic mucosa.**
- **Blood levels of estradiol, polyamine, or ornithine decarboxylase were not correlated with the number of estrogen receptors in the mucosa.**
- **Tumor incidence was not related to blood levels of estradiol.**

Discussion

Common Problems

- **Not answering the research question**
- **Repeating the results rather than discussing their implications**

Discussion

Common Problems

- **Confusing statistical significance with biological or clinical importance**
- **Confusing supported conclusions with speculation**

**Questions on
discussions?**

Acknowledgments

Purpose

- **To thank contributors who are not authors**
 - **must have approval of those listed**

References

Purpose

- **To allow readers to verify authors' claims and arguments**

References

- **Do not cite:**
 - **personal communications**
 - **abstracts**
 - **unpublished observations**
 - **submitted manuscripts**
 - **secondary sources**
 - **unread sources(!)**

Visuals (Tables and Figures)

Purpose

- **To communicate information more effectively and efficiently than is possible in text**

Visuals

- **One visual per page**
- **With titles and captions, should be self-explanatory**
- **Cite all figures and tables in the text in numerical order**

Submitting the Manuscript

**Follow the journal's
*Instructions for
Authors!!***

Submitting the Manuscript

- **In the cover letter:**
 - **Describe the value of the article**
 - **Declare conflicts of interest**
 - **Disclose previous publication or presentations**
 - **Request waiver of submittal fee or page charges**

Submitting the Manuscript

- **On-line submittal**
 - **Read instructions before starting**
 - **Record how to access your account**
 - **Collect needed data before starting**
 - **Be prepared to spend a long time:
file formats, size, and names;
word counts, author information**

Submitting the Manuscript

- **Assurances:**
 - **Copyright transfer**
 - **Conflict of interest statement**
 - **Copyright permission**
 - **Signatures of authors**

Submitting the Manuscript

- **Payments:**
 - **Submittal or reviewing charge**
 - **Page charges**
 - **Charges for color photographs**
 - **Payments for reprints**

Submitting the Manuscript

- **Expect a response within 3 months**
- **Track progress on the journal's website**

The secret to scientific publishing:

Have something to say.

Say it.

Stop!