The Mechanics of Writing

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Writing Manuscripts
Write Your Paper

• Sit down and write
• Writing is learned by experience-keep writing
• Find your rhythm
Writing Manscripts
Writing is an act of thinking

• Think through what you want to say
• Write Outline
• Recruit Co-authors
  – Ensure Up Front Author Order
• Recruit Reviewers
• Target Sequence of Journals (Like your match list)
  – Do not simply cascade down for IF list
Unity

- pronouns - first/second/third person
- tense - past/present/future, be consistent and only change when necessary
- mood - casual or formal?
Suggestions

• Verbs-use active verbs
  – Joe saw him.
  – He was seen by Joe
• Use precise language
• Adverbs
  – Most adverbs are unnecessary
  – Is there any other way to “clench your teeth tightly”?
• Adjectives
  – Most adjectives are unnecessary
• Qualifiers
  – A bit tired – why “a bit”? Your just tired!
Interesting Writing

• Rhythm
• Interesting words (occasional)
• Details reader want to know about

• Cadence: Fouad Ajami
• Keep readers interested: Gladwell

Zinser On Writing Well
Lead

The most important sentence in an article is the first one. The most important paragraph is the first one.

Your lead must capture the reader immediately and force him to keep reading. Next, details must gradually build up - keep the reader inquisitive.

Writing is the act of developing a relationship between the author and reader. Think about your writing in these terms.

An example lead:
I've often wondered what goes into a hot dog. Now I know and I wish I didn't.
Make the Lead Interesting

• In 2011, chaos erupted in Arab lands, resulting in the toppling of many political regimes. Despite skepticism by many, communication via social media sparked a large wave of protests. This was mostly response by young people against their elders.
The Arab Spring at One A Year of Living Dangerously (Foreign Affairs)

Author: Fouad Ajami

Throughout 2011, a rhythmic chant echoed across the Arab lands: “The people want to topple the regime.” It skipped borders with ease, carried in newspapers and magazines, on Twitter and Facebook, on the airwaves of al Jazeera and al Arabiya. Arab nationalism had been written off, but here, in full bloom, was what certainly looked like a panArab awakening. Young people in search of political freedom and economic opportunity, weary of waking up to the same tedium day after day, rose up against their sclerotic masters.
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The Last Sentence

• Just as important as the first

• It's your final message to the reader
The Last Sentence

• “The best day after a bad emperor is the first,” the Roman historian Tacitus once memorably observed. This third Arab awakening is in the scales of history. It has in it both peril and promise, the possibility of prison but also the possibility of freedom.
A Comparison of 2 Reviews
Sample Introduction (Surgical Journal) Paragraph #1

- The World Health Organization (WHO) estimates that there are more than 500 million obese individuals worldwide.\textsuperscript{1} Morbid obesity, defined as a body mass index (BMI) greater than 40 kg/m\textsuperscript{2}, is associated with significant comorbidities including cardiovascular disease, obstructive sleep apnea, an increased risk of cancer, and the metabolic syndrome.\textsuperscript{2–4} This population is at high risk of developing venous thromboembolism (VTE). Indeed risk of VTE may be directly proportional to BMI.\textsuperscript{5}
• Bariatric surgical procedures have been shown to be the most effective treatment modality for morbid obesity and its comorbid conditions. Procedures include laparoscopic or open Roux-en-Y gastric bypass (RYGB), laparoscopic adjustable gastric banding (LAGB), and laparoscopic sleeve gastrectomy (LSG). They are thought to work through the so-called “BRAVE” effects (Bile flow alteration; Reduction of gastric size; Anatomical gut rearrangement and altered flow of nutrients; Vagal manipulation; and Enteric gut hormone modulation).

Bariatric procedures are increasingly performed worldwide and there is growing evidence that they may represent a sustainable cost-effective long-term solution for the treatment of morbid obesity.
Sample Introduction (Surgical Journal) Paragraph #3

- VTE is a significant cause of morbidity and mortality in the bariatric surgical population. Historically, the incidence of symptomatic VTE in open bariatric surgery has been reported as high as 3.4%. In modern practice with the use of perioperative thromboprophylaxis and pneumatic calf compression devices, VTE may still occur in more than 2% of all open procedures. Those undergoing revisional surgery are potentially at greater risk still. The introduction of laparoscopic bariatric surgery has been associated with reduced rates of VTE. A recent meta-analysis of published literature demonstrated that the overall incidence of symptomatic VTE in modern laparoscopic bariatric procedures is less than 1% with a further 1% thought to have subclinical disease. These figures suggest that conventional methods of thromboprophylaxis such as the use of sequential calf compression devices and perioperative low molecular weight heparin may be adequate for the bariatric surgical population as a whole. However, in many cases, this approach is seen to be inadequate due to the presence of multiple risk factors for VTE or the presence of a contraindication to pharmacological prophylaxis. This has led to the increased use of inferior vena-caval filters in modern bariatric surgical practice.
Sample Introduction (Surgical Journal) Paragraph #4

• Currently there is a lack of consensus on the most effective strategy for prevention of VTE in patients undergoing bariatric surgery. A recent survey of predominantly North American surgeons suggests that more than 92% of bariatric surgeons routinely use preoperative pharmacological prophylaxis. The majority of surgeons prescribe sequential compression devices in high-risk patients (96.3%) and pharmacological prophylaxis is used postoperatively by 97%; however, the duration and dose of therapy is highly variable. In patients perceived to be high risk, routine use of IVC filters is reported by 28.1% of surgeons, with more than half of these patients receiving additional pharmacoprophylaxis on discharge.13 At present, there is no cross-sectional data available to describe strategies employed in other parts of the world. In the United Kingdom, the National Institute of Clinical Excellence recommends mechanical prophylaxis with 5 to 7 days of pharmacological therapy after bariatric surgery; however, the role of IVC filters is not discussed.14 Although most would agree that there is a role for both pre- and postoperative pharmacoprophylaxis, the use of IVC filters remains a contentious issue among bariatric surgeons worldwide.
To date, there are no randomized trials investigating the role of IVC filters for prevention of VTE in bariatric surgical patients. We aim to review the evidence for the use of IVC filters in bariatric surgical patients, describe trends in practice, and discuss challenges in developing evidence-based guidelines.
Sample Introduction (Surgical Journal)

• Inferior Vena Cava Filters for Prevention of Venous Thromboembolism in Obese Patients Undergoing Bariatric Surgery: A Systematic Review

• Rowland, Simon P. MRCS (Eng)*; Dharmarajah, Brahman MRCS (Eng)*; Moore, Hayley M. MRCS (Eng)*; Lane, Tristan R. A. MRCS (Eng)*; Cousins, Jonathan FRCA†; Ahmed, Ahmed R. FRCS‡; Davies, Alun H. FRCS*

• Annals of Surgery Volume 261(1), January 2015, p 35–45
• Although bariatric surgery is commonly performed, it is not universally accepted as an obesity treatment. In 2009, a Cochrane systematic review advised caution before accepting the effectiveness of bariatric surgery because of limited high-quality evidence supporting its use.¹ Most published studies of bariatric surgery are retrospective, short-term studies with insufficient follow-up.² Substantial missing data in these studies preclude definitive conclusions about the procedures’ outcomes. Although there is ample short-term evidence about the benefits and risks of bariatric surgery up to 1 year after surgery, few data are available about long-term outcomes or groups.
• Obesity is a chronic disease, as are its complications. Treatment success and groups should be assessed in long-term studies, particularly when the treatment is as invasive as major surgery. To ensure that outcomes are accurately assessed, researchers should follow up patients until the study’s end, particularly when treatment failure is a common reason for patients to not complete the study. If not adequately accounted for, loss to follow-up attributable to treatment failure may cause overestimation of treatment success.
We performed a systematic review of the literature to determine the association of bariatric surgery with outcomes of weight loss, diabetes, hypertension, and hyperlipidemia in studies of at least 2 years’ duration and with at least 80% follow-up of patients.
• **Long-term Follow-up After Bariatric Surgery**
  A Systematic Review

- Nancy Puzziferri, MD, MS\(^1,2\); Thomas B. Roshek III, MD\(^1\); Helen G. Mayo, BS, MLS\(^3\); Ryan Gallagher, BA\(^1\); Steven H. Belle, PhD, MScHyg\(^4\); Edward H. Livingston, MD\(^1,2,5,6\)

The Last Paragraph-Them

• Published data reporting the safety and efficacy of IVC filter use in bariatric surgical patients are highly heterogeneous and lack randomized controlled trial evidence. Given the shift toward laparoscopic surgery and ongoing developments in filter technology, current evidence may not be directly applicable to modern bariatric surgical practice. At present, we would recommend that preoperative IVC filter insertion should only be considered for prevention of VTE in high-risk bariatric surgical patients. It is important to consider the potential for significant harm resulting from IVC filter insertion. The benefits of therapy are unlikely to outweigh the risks unless there are multiple risk factors for VTE, which may include super-morbid obesity, previous VTE, pulmonary hypertension, a history of coagulopathy, chronic severe immobility, obstructive sleep apnea, or evidence of preoperative lower limb venous stasis. Where IVC filters are used, there is evidence to suggest that early retrieval will increase technical success and reduce long-term complications. Given the significant challenges in performing a randomized controlled trial in this population, large multicentre prospective trials with well-defined patient cohorts should be designed to investigate the role of IVC filters in modern bariatric surgery.
The Last Paragraph-Us

• Studies of bariatric surgery long-term outcomes demonstrate substantial and sustained weight loss for gastric bypass procedures exceeding that for gastric band. There are few long-term studies with similar reliable follow-up for gastric sleeve operations. Flawed study design and incomplete assessment and reporting limit conclusions being drawn from most studies that had reasonable follow-up. To fully characterize the efficacy of bariatric surgery, long-term outcomes studies should report results for at least 80% of initial cohorts and with follow-up exceeding 2 years.
Clutter

• Use short and not long words
  – Assistance=help
  – Facilitate=ease
  – Numerous=many
  – Individual=man or women
  – Remainder=rest
  – Initial=first
  – Implement=do
  – Sufficient=enough
  – Attempt=try
  – Referred to as=called  

Zinser *On Writing Well*
Clutter

• Exercise: Put brackets around unnecessary words
  – Unnecessary preposition appended to a verb (order up)
  – Adverb carries the same meaning as the verb (smile happily)
  – Adjective states a known act (tall skyscraper)
  – Qualifiers that weaken a sentence (a bit, sort of)
  – Meaningless phrases (in a sense)

Zinser On Writing Well
Simplifying – Put brackets around these

• useless prepositions like "free [up] time" => "free time"

• long words like “[facilitate]" => "ease" or “[implement]" => "do"

• phrases which add no meaning like “[It is interesting to note]..."

• phrases which inflate to sound more important like “[at this juncture of maturation]" => "now"
Clutter - Inflation

- With the possible exception of except
- Due to the fact that because
- He totally lacked the ability to he couldn’t
- Until such time as until
- For the purpose of for

Zinser On Writing Well
Words to Avoid

• That
• There is, There are, There was, There were
There were

• Switch sentence around:

  There were 849 patients excluded from the trial because they did not meet the studies inclusion criteria. (17 words)

• Because they did not meet the studies inclusion criteria, 849 patients excluded from the trial. (15 words)
Word Changes

• As well as=and
• For consideration of=evaluation
• Have been previously=were
Word Changes-From the JAMA Editors

• Paper-article
• were found to have – had
• Age > 50 – older than 50 years
• 18 to 60 years of age-Aged 18 to 60 years
• While – Even though
• Available drug – Available treatments
• though – however
• The association….with - The association…and
• 75 to 100 million – Between 75 to 100 million individuals…
• Americans – individuals in the United States
• Given – because of
Word Changes-From the JAMA Editors

• Growing-Increasing
• Body of evidence-amount of evidence
• acute appendicitis patients-patients with acute appendicitis
• Success rates – efficacy
• inability to cooperate – unable to cooperate
• Give – provide
• Since they had undergone – because they had undergone
• 15 patients in the antibiotic group underwent – of 257 patients in the antibiotic group, 15 underwent
• At the same time period – during the same period
• All over the world – throughout the world
Word Changes-From the JAMA Editors

• used appropriately and by patients who will benefit from its use CHANGE TO used appropriately and that patients will benefit from its use. (1 less word)

• diagnosed with CHANGE TO diagnosed as having

• Now on oxycodone CHANGE TO now taking oxycodone (more specific word)

• He felt CHANGE TO he thought

• people twelve years of age or CHANGE TO people aged twelve 12 years or

• marijuana laws in order to facilitate access CHANGE TO marijuana laws to facilitate access (unnecessary words)

• due to-because of

• Over-more than

• Focused on- examined, investigated
Word Changes-From the JAMA Editors

• Acute use, chronic use – short-term or long-term use
• Compared to-compared with
• Motor vehicle accident – motor vehicle crash
• To be employed – used
• While… - Although…
• Feels – believes
• Period of time – period (unnecessary words)
• Providers – clinicians, practitioners
• Employed – used
• Due to – because of
Precision in Writing

• NOT: The procedure provides strict control of the false positive error rate because…

• SAY: Gatekeeping provides strict control of the false positive error rate because…

• NOT: …confronting him about taking someone else's food might create a response ranging from mild irritation…

• SAY: …confronting him about taking someone else's food might result in a response ranging from mild irritation…
Word Changes-Redundancy

• Add a new.
• In order to=for, to, as
• Overused cliché.
• Past history.
• Period of time.
• Plan ahead.
• Straight to the point.
• Tall skyscraper.
• Thanks in advance.
Zinsser Summary

• Every word that serves no function, every long word that could be a short word, every adverb that carries the same meaning that’s already in the verb, every passive construction that leaves the reader unsure of who is doing what — these are the thousand and one adulterants that weaken the strength of a sentence.

• Interpretation: One sentence taught me to swap fancy words for simple ones, cut words ending in -ly and don’t be passive aggressive. Why opt for the snooty “utilize” when you can use the effortless “use?” And who needs the mind-numbing “numerous” when the four-lettered “many” works? Here, the Thesaurus is your friend.
Getting Articles Published

- Revise and revise – Many drafts
  - Each draft: Cut 10% of words
- Senior colleagues to review drafts are critical
Listen to your Editor

Listen to your Editor

- They edit all day long
- They see things you do not because you are too close to the work.
“Beginners,” Edited

Terri said the man she lived with before she lived with Mel Herb loved her so much he tried to kill her. Herb laughed after she said this. He made a face. Terri looked at him. Then Terri she said, “He beat me up one night, the last night we lived together. He dragged me around the living room by my ankles. He kept saying, ‘I love you, don’t you see? I love you, you bitch.’ He went on dragging me around the living room. My head kept knocking on things.” Terri She looked around the table at us and then looked at her hands on her glass. “What do you do with love like that?” she said. She was a bone-thin woman with a pretty face, dark eyes, and brown hair that hung down her back. She liked necklaces made of turquoise, and long pendant earrings. She was fifteen years younger than Herb, had suffered periods of anorexia, and during the late sixties, before she’d gone to nursing school, had been a dropout, a “street person” as she put it. Herb sometimes called her, affectionately, his hippie.

• http://www.newyorker.com/online/2007/12/24/071224on_onlineonly_carver
Orwell’s 6 Writing Tips

• Never use a metaphor, simile, or other figure of speech which you are used to seeing in print.
  – shoulder to shoulder with, play into the hands of, an axe to grind, Achilles’ heel

• Never use a long word where a short one will do.

• If it is possible to cut a word out, always cut it out.

• Never use the passive where you can use the active.
Orwell’s 6 Writing Tips

• Never use a foreign phrase, a scientific word, or a jargon word if you can think of an everyday English equivalent.

• Break any of these rules sooner than say anything outright barbarous.
  – break the previous rules when necessary for a proper sentence.

– Orwell, G. Horizon (volume 13, issue 76, pages 252–265) 1946
Writing Manuscripts
Your First Draft

- Just write!
- Do tables or abstract first
- Circulate as a full paper
- Double space except for tables/references
- Do not list authors without talking with senior author
- Date all drafts
- Prompting your co-authors
- Get examples of similar papers
- http://www.equator-network.org
Writing Manuscripts
Keys to Success

- Clarity (abstract)
- Brevity (2500 words) - VERY IMPORTANT
- Novelty (why this journal)
- Modesty (some)
- Tell a story
Be Modest

• They could have said “These crucially important and novel findings will transform the way scientists think about genetics”

• But they did not:

It has not escaped our notice that the specific pairing we have postulated immediately suggests a possible copying mechanism for the genetic material.
MOLECULAR STRUCTURE OF NUCLEIC ACIDS

A Structure for Deoxyribonucleic Acid

We wish to suggest a structure for the salt of deoxyribonucleic acid (DNA). This structure has novel features which are of considerable biological interest.

A structure for nucleic acid has already been proposed by Pauling and Corey. They kindly made their manuscript available to us in advance of publication. Their model consists of three inter-twined chains, with the phosphates near the fibre axis, and the bases on the outside. In our opinion, this model is undervalued for two reasons: (1) We believe that the material which gives the X-ray diagram is the salt, not the free acid. Without the sodium hydrogen salt it is not clear what form would hold the structure together, especially as the last phosphate near the axis will then be sodium hydrogen and thus repel each other. (2) Some of the van der Waals distances appear to be too small.

Another model has been suggested by Fajer (in the press). In his model the phosphates are on the inside, linked together by hydrogen bonds. This structure is described as rather ill-defined, and for this reason we shall not comment on it.

We wish to put forward a radically different structure for the salt of deoxyribonucleic acid. This structure has two helical chains each carried round the central acid (the core structure). We have used the usual chemical assumptions, namely, that each chain consists of phosphates which carry a net charge, and that the chains are held together by hydrogen bonds. This structure is described as rather ill-defined, and for this reason we shall not comment on it.

We propose a model for the structure of DNA, which we believe is more likely to be correct. The model consists of two antiparallel helical chains, each carrying the polynucleotide backbone. The helices are wound around each other in a left-handed helix, with the polynucleotide backbone in the center. The model is consistent with existing X-ray diffraction data, and provides a plausible explanation for the observed physical properties of DNA.
Lincoln’s 2nd Inaugural Address

- 701 Words
- 505 One Syllable
- 122 Two syllables
Lincoln’s 2nd Inaugural Address-Start

• AT this second appearing to take the oath of the Presidential office there is less occasion for an extended address than there was at the first. Then a statement somewhat in detail of a course to be pursued seemed fitting and proper. Now, at the expiration of four years, during which public declarations have been constantly called forth on every point and phase of the great contest which still absorbs the attention and engrosses the energies of the nation, little that is new could be presented. The progress of our arms, upon which all else chiefly depends, is as well known to the public as to myself, and it is, I trust, reasonably satisfactory and encouraging to all. With high hope for the future, no prediction in regard to it is ventured.
Lincoln’s 2nd Inaugural Address-Finish

• With malice toward none, with charity for all, with firmness in the right as God gives us to see the right, let us strive on to finish the work we are in, to bind up the nation's wounds, to care for him who shall have borne the battle and for his widow and his orphan, to do all which may achieve and cherish a just and lasting peace among ourselves and with all nations.
### Concise Summaries

- **What is the problem**
- **What is the solution**
- **What are the implications**

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Resources

• AMA Manual of Style
• Knight, Robert. Journalistic Writing
• King, Stephen. On Writing: A Memoir of the Craft
• Orwell, George. Politics and the English Language
• Strunk and White
• Warriner’s Grammar
• Zinsser, William. On Writing Well