All authors strive to present a clear and concise message to the reader regarding the primary topic of their study. Any message worth conveying in writing is: (1) important to the target audience, (2) supported by facts presented within the manuscript, and (3) clearly delivered so that no confusion can arise about what the author means to convey. This process sounds simple, but the fundamental manuscript structure necessary to optimize communication all too frequently gets lost in translation during the transformation from project to publication. Journal reviewers, editors, and editorial staff play a significant role in maximizing the clarity of each manuscript published in the Journal of Refractive Surgery and other ophthalmic journals; however, our work process is limited by the initial submitted product. Without initial clarity and focus, the authors risk having their work misquoted, misunderstood, largely ignored, or rejected.

Article length and the value of brevity have been addressed in a previous editorial. This editorial will focus on manuscript development because it is so crucial to our readers and authors alike. There are three fundamental steps to facilitate communication:

1. Prepare the readers for what they are about to learn through the Introduction and Statement of Purpose.
2. Precisely present the study process and outcomes fluidly through the Methods and Results sections.
3. Summarize the primary findings in the Statement of Findings, and then place this work in proper context through the Discussion section.

By following this basic outline, authors will achieve maximal communication with their readers. With that background, let’s construct a manuscript from the ground up.

**TITLE: PROVIDE A REASON TO READ YOUR MANUSCRIPT**

Manuscript titles need not be catchy or clever, but they must clearly convey the topic and attract readers’ attention. The title may be all that readers see in their initial glance through the Table of Contents, so make sure to give them a reason to read your article. Generic titles risk sounding similar to previous work and getting bypassed; include the unique element of your study in the title whenever possible.

**INTRODUCTION: INTRODUCE ONLY “YOUR” MANUSCRIPT**

Most opening paragraphs contain information that is superfluous and detracts from the message contained in this section. Far too many start from the very beginning of a well-known, established topic; this does little to introduce “your” work, and simply takes up time and space that would be better dedicated to your specific topic. The better established a primary concept is, the less our readers will benefit from its full reiteration. Readers no longer need to be “introduced” to the basic elements of keratoconus, excimer laser ablation, cataract surgery as refractive surgery, the basic function of multifocal intraocular lenses, the scourge of astigmatism, or other repeating themes in refractive surgery.

However, our readers do need to know some basic information about new or novel techniques or technology; examples today include the INTRACOR technique for presbyopia, small incision lenticule extraction (SMILE) for myopia, intracorneal inlays, and specific specifications of new technology intraocular lenses. Reference lists simultaneously grow excessively when Introductions are too broad. A balance must be struck between too much and too little background information; most authors err by providing too much.

As a good rule of thumb, approximately three introductory paragraphs should serve the needs of the topic.
the first to introduce the theme of the article, the second to provide background with literature citations to introduce current thinking in the area, and the third, stand-alone paragraph to serve as the Statement of Purpose.

**STATEMENT OF PURPOSE: TELL THE READER WHAT YOU STUDIED AND WHY YOU STUDIED IT**

Although contained within the manuscript’s introduction, the Statement of Purpose is of unique value to warrant its own section in this editorial. Every study, no matter how detailed, should be summarizable in a single statement of purpose. Specifically, this statement should include why the author performed the study and, by implication, why the reader should read it. This statement should stand alone as a paragraph at the end of the Introduction to make it easier to identify and lead the reader directly into the Methods section. Clear, recognizable language facilitates the identification and communication of the Statement of Purpose: examples include “The goal (or aim) of this study was to…” or “The purpose of our study was to…”

**METHODS: EXPLAIN THE STUDY DESIGN SO OTHERS MAY REPLICATE IT**

Scientific endeavors are only as valid as their ability to be tested, challenged, and withstand scrutiny that follows that process. This section should state what was done in explicit detail so that different examiners in different locations and situations can undertake the same study to support or refute the reported findings. Common study design flaws include multiple endpoints that muddy statistical significance, insufficiently powered studies, and improperly applied statistical analyses.

Ideally, only one hypothesis should be evaluated per manuscript. A project with too many hypotheses risks losing its significance, both statistically and practically, by convoluting the study performed and the message delivered from it. When multiple endpoints are reported, authors should consider whether to evaluate statistical significance within the context of the number of analyses performed, and whether to use some adjustment to account for multiple comparisons, such as the Bonferroni method or analysis of variance (ANOVA).

A second common problem is underpowered studies, with insufficient sample size to support the conclusions drawn. Authors need a guide to facilitate their understanding about the relation of their study size to the claims they make regarding safety outcomes. A simple estimation can be performed using the “rule of three,” which allows authors to make reasonable approximations of what differences in outcomes they would be likely to find based on the number of subjects evaluated and the likelihood of that outcome occurring.

The full scope of biostatistics, including study power and advanced analysis techniques, is outside the scope of this Editorial. Suffice it to say that robust statistical analyses make for robust manuscripts. When in doubt, a trained biostatistician should be consulted for final manuscript preparation.

**ETHICAL CONSIDERATIONS FOR STUDIES AND STATEMENTS OF ETHICS OVERSIGHT**

All manuscripts must include a clear statement related to the approval obtained to perform the study from the institution or some other regulatory board’s ethics committee. This must be clearly stated in the Methods section for all manuscripts! For authors in the United States, this should be a statement regarding the Institutional Review Board (IRB) approval obtained, whereas international authors should state the specific IRB or ethics board when used or, where no ethics board is available, the authors must clearly state that the study has followed the tenets of the Declaration of Helsinki.

**RESULTS: REPORT FINDINGS ROBUSTLY AND CLEARLY AND REPORT THEM ONLY ONCE**

Good manuscripts present data that logically flow from the study design illustrated in the Methods section. When this occurs, the reader can easily follow the data presented and there is no need to reiterate the same information in multiple formats. All too often, authors try to report their data as often as possible in the text and in table and/or figure form. This reiteration is unnecessary. Simply put, present your data well, present it once, and then move on to discuss its relevance.

The importance of figures and tables in data presentation cannot be overemphasized. The ideal manuscript can convey most of its message with an effective title combined with excellent figures and tables. If the graphics are appropriate, the reader will already have reached the author’s conclusion before it is even laid out in the Discussion! However, graphics with limited or unclear information do nothing more than clutter up the Results section and detract from the message. Figures are usually best to demonstrate general findings and trends, whereas tables include critical specific data points (averages, standard deviations, etc.) that facilitate future study comparisons. When large data tables are submitted that serve some purpose for future research but do little to clarify the fundamental aspects of the study, the Journal of Refractive Surgery may include that information in an online-only PDF format so that particularly interested readers have access to it now and so the data can be archived online for the future.
Finally, communicate results in language familiar to readers. For now, that means visual acuity in Snellen equivalent and the use of common abbreviations only. The Journal has a proud history of leading the way on reporting refractive surgical outcomes in the Standard Graphs. This format is no longer unique to the Journal of Refractive Surgery, with many other journals also adopting common graphs and common terminology to facilitate communication. The Standard Graphs should be used whenever possible and appropriate.

**DISCUSSION PART 1: THE STATEMENT OF FINDINGS**

If a manuscript has done its job well, the reader will reach the Discussion fully prepared to receive a concise, summarized statement of the significance of the study’s specific findings. All too often, the authors leave the reader in limbo for many paragraphs before actually summarizing their own findings! Simply put, summarize your key findings (not data) in a statement or two from the very beginning of the Discussion. Only after clarifying the study’s primary findings should authors move on to discuss their project as it relates to the grander scheme of the topic and body of literature.

**DISCUSSION PART 2: CONCISE ELABORATION**

Just as the Introduction should introduce only your study, the Discussion section should primarily discuss elements of your study, placing them within the context of other work as appropriate. This should include a thorough elucidation of the relevance of this manuscript as it pertains to past, present, and future clinical practice and research, and direct comparisons to other respected studies are of value, especially when the findings differ in some way from “accepted” dogma. A useful mantra is to “report only what you studied, and to discuss only what you report.”

New data and study elements should not be introduced in the Discussion; this belongs in the Results. Similarly, figures and tables should only be introduced in the Discussion when they pertain to a summary of or comparison with other authors’ work. The Discussion section is meant to serve as a “discussion” of your findings, not a place to restate them. Do not re-report data and P values in the Discussion.

Finally, although every topic in science may benefit from a “randomized, controlled, double-masked study design,” that frequently will not happen for a variety of reasons. Thus, blanket statements of this type are generally unnecessary, unless the authors care to discuss a particular study design meant to encourage future authors on something specific to study to move the field forward.

**THE ABSTRACT: THE FIRST, LAST, AND MOST SIGNIFICANT SUMMATION OF YOUR WORK**

Although the Abstract appears at the beginning of the article, most authors find it best to compose it upon completion of their manuscript. The Abstract is the most concise presentation of the study and by far the most important because it may be the only section casual readers actually see!

Abstracts are searchable and obtainable through most search engines and, for better or worse, may be primarily relied on. The abstract should contain all of the critical elements of your study and summarize all key findings, including data. Broad overviews without data do little to propagate your work. Most journals have a word limit on Abstracts; the Journal of Refractive Surgery allows 250 words to get your message across, so be concise.

Using these guidelines to construct your manuscript will streamline the process, improve your opportunity for publication by submitting an easy-to-follow story, and should lead to better acquisition, comprehension, and retention of your material. I look forward to your next submission!

**REFERENCES**