

Understanding Research Methods and the Readers' Toolbox: A New Article Type

Evan D. Kharasch, M.D., Ph.D.

The clinical and scientific questions addressed in ANESTHESIOLOGY naturally change over time, as fields evolve, new observations and discoveries are made, conundrums are resolved, and new diseases, drugs, procedures, technologies, and questions arise. It is not only the questions that change, however. Research methods themselves evolve. Sometimes these new methods may be brought to bear on persisting problems, and other times new research techniques may spawn entirely new lines of investigation.

Evolving research methodology creates both opportunities and challenges for investigators and a different set of challenges for readers of the Journal. Longstanding recognition of the need for clinicians to maintain clinical competence, enable life-long learning, and enhance practice quality, led to the development of a vast industry dedicated to providing Continuing Medical Education. However, there is comparatively little opportunity for clinician or investigator consumers of new knowledge to keep abreast of new research techniques, either to understand the research literature or implement such methods in their studies. This gap exists across the spectrum from basic, clinical, and population (outcomes and health services) research.

ANESTHESIOLOGY therefore introduces this month a new article type, **Understanding Research Methods**. We envision this as Continuing Methodologic Education in the realm of research, analogous to Continuing Medical Education in the domain of clinical practice. **Understanding Research Methods** articles will be the first in an entirely new category of articles called the **Readers' Toolbox**. The **Toolbox** is designed to be useful, easy to use, and reader-centric. **Toolbox** articles will not be linked to an original article



“Understanding Research Methods articles are written for nonexperts who want to understand not only the ‘what’ of journal content but also the ‘how’ by which it was obtained...”

Investigations in the Journal and elsewhere. Another goal will be to make investigators aware of new tools and approaches that they may incorporate into their research armamentarium. In reach, we aim to deliver this new content to the broadest spectrum of ANESTHESIOLOGY readers: clinicians, nonexpert researchers, and even expert investigators. The goal is clarity of presentation with content that is easily comprehensible. Articles should be both understandable and providing understanding.

Understanding Research Methods articles are written for nonexperts who want to understand not only the “what” of journal content but also the “how” by which it was obtained, to translate knowledge to clinical practice. In addition to clinicians, investigators may be introduced to research methods not currently in their armamentarium. It is also hoped that **Understanding Research Methods** articles will be read and valued beyond the anesthesiology community. We aim to engage contributors from within the

appearing in the same issue of the journal, but rather will be “free-standing,” as are other summative-type articles.

Understanding Research Methods articles will present existing and emerging research methods that are or will become relevant to anesthesiology research and implemented into clinical practice. This is part of the ongoing effort to increase the richness and reach of ANESTHESIOLOGY.¹ In richness, this new ANESTHESIOLOGY content will feature introductions to research methods and updates on them—including basic science, clinical research, outcomes and health services research, and biostatistics. Articles will be intended for both clinicians and investigators. One goal will be to enable readers to keep pace and to better critically read and understand the Original

Image: Wolters Kluwer Health.

Corresponding article on page 192. Michael M. Todd, M.D., served as Handling Editor for this article.

Accepted for publication November 26, 2018. From the Department of Anesthesiology, Duke University School of Medicine, Durham, North Carolina.

Copyright © 2019, the American Society of Anesthesiologists, Inc. Wolters Kluwer Health, Inc. All Rights Reserved. Anesthesiology 2019; 130:181–2

specialty as well as from outside—attracting the true experts. **Understanding Research Methods** topics are anticipated to be wide-ranging, because of the clinical breadth (*e.g.*, neuroscience, pharmacology, cardiovascular, and pulmonary) and basic and clinical research breadth (perioperative, critical care, pain medicine, and education) of the specialty.

Understanding Research Methods articles will have a different and dedicated format designed for maximum comprehension. The first page will feature an infographic, as a single, comprehensive drawing presenting a generalized overview of the seminal aspects of the article in graphic form to enable the reader to quickly and clearly grasp the essence of the message. Tables, text boxes, and figures will highlight and explain salient points from the text and enhance the effectiveness of the communication. One box, titled “What to Look for in Research Using This Method,” will appear near the beginning of the article and provide the reader with the essential elements they should look for in a research report using the method. Another box, titled “Where to Find More Information on This Topic,” will appear near the end of the article and contain citations of articles, websites, and other resources.

This issue of *Anesthesiology* premieres the first **Understanding Research Methods** article, by Drs.

David Story and Alan Tait, on methods in survey research.² We hope that readers will find the **Readers’ Toolbox** and **Understanding Research Methods** articles interesting and useful. Please let us know what you think, and if you have suggestions for additional types of **Readers’ Toolbox** articles.

Competing Interests

Dr. Kharasch is the Editor-in-Chief of *ANESTHESIOLOGY*, and his institution receives salary support from the American Society of Anesthesiologists for this position.

Correspondence

Address correspondence to Dr. Kharasch: evan.kharasch@duke.edu

References

1. Kharasch ED: Changes: Handing off and the future of *ANESTHESIOLOGY*. *ANESTHESIOLOGY* 2016; 125:4–6
2. Story DA, Tait AR: Survey Research. *ANESTHESIOLOGY* 2019; 130:192–202