

# To the Editor: Not All Case Reports Are Created Equal

In their October article, Lowenfels and colleagues argue for the continued role and value of case reports in scholarship for residents and fellows.<sup>1</sup> As proofs for their argument, they describe case reports that have lasting impacts on medical discovery and that act as educational tools. Though the perspective implies categorization, it does not provide learners a model for identifying the value in cases.

We propose a typology for case reports based on their contribution to medical literature. The typology allows learners to classify case reports as primarily contributing detection, extension, diffusion, or fascination to medical literature.

*Detection* cases represent an actual first in the medical literature and are comparatively rare. Examples include a newly described disease, medication side effect, surgical technique, or treatment complication. It is common for these publications to be a case series of a cluster of cases noted by one or more clinicians. Often, these case reports include a hypothesis about underlying causes or pathophysiology. This category includes the notable case reports described by Lowenfels and colleagues.<sup>1</sup>

Instead of representing a true first, *extension* cases expand the boundaries of what is known. Examples include widening the known age range within which a condition occurs, describing an infectious disease appearing in a new geographic location, or identifying a previously undescribed variant of a medication side effect. Authors use language describing the case as a first within a specific population, such as “the first reported case of X in Y.” Indeed, the line between detection and extension case reports is somewhat blurry, and it often comes down to a “lumping versus splitting” decision.

*Diffusion* case reports generally assert no claim of novelty. Instead, the case spotlights the medical issue at hand. The case may represent a rare condition that is important to diagnosis when encountered, an emerging disease that many clinicians will not have diagnosed, or an established medication side effect that is often overlooked. The common thread in a diffusion case report is highlighting medical knowl-

edge that the author feels should be known by more clinicians. Sometimes the case is accompanied by a review of the literature.

*Fascination* case reports are valuable because their wonder-inducing quality of the presentation or clinical course draws in readers to demonstrate the true range of clinical entities that are possible. They are often accompanied by a dramatic photo or imaging study. However, the educational aspect of such a publication is minimal compared to the “wow factor.” There is generally an inverse relationship between a case’s ultimate value to the medical literature and its level of interest to an individual reader.

This typology allows learners and their faculty who are considering writing a case report to critically analyze why it is worth publishing and how they frame the presentation to contribute to the evidence base. We are currently conducting an exploratory study to describe how published case reports fit into this typology.

All case reports provide some level of education to readers, but not all case reports are created equal.

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## References

1. Lowenfels AB, Mamtani R, Solomon LW, Maisonneuve P, Cheema S. The value of case reports for graduate medical education. *J Grad Med Educ.* 2022;14(5):529-532. doi:10.4300/JGME-D-21-01115.1



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## To the Editor: Not All Case Reports Are Created Equal—Reply

**In Reply:** We thank Drs. Seehusen and Ledford for their comments on our perspective titled, “The Value of Case Reports for Graduate Medical Education.” They propose a conceptual framework to categorize various types of case reports based on the report’s contribution to medical literature. We agree: “Not all

case reports are created equal.” There is an enormous difference between case reports that lead to a Nobel Prize and case reports that extend existing knowledge or are merely imaginative. We look forward to seeing their review of how published case reports fit into their proposed classification scheme.

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