Educational Case Reports: Purpose, Style, and Format

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Case reports continue to play a time-honored role in academic medicine, by communicating clinical findings and advancing medicine [1]. Though a less rigorous level of evidence, because they describe one case that later may prove to be anomalous or “one-off,” some cases nevertheless have led to significant discoveries. Other fields, including law, business, and education, utilize their versions of case reports, often termed case studies. Law students read legal cases, proceedings, judgements, and verdicts. Business journals publish detailed accounts of the success or failure of corporations. The most germane to medical education is the use of case studies in graduate schools of education. Examples include reports of the implementation of a new teaching method, interventions, or programs at a particular school and, more broadly, the effects of a change in educational policy or regulations.

In this editorial, we discuss case reports about medical education and reflect on lessons we might learn from the tradition of case studies in the field of education at large. To be clear, we are focusing on reports in medicine about educational methodologies, interventions, initiatives, policies, application of adult learning theory, and the like. These reports are not to be confused with clinical case reports that are meant to be educational. Several journals specializing in medical education accept educational case reports, commonly about innovations in teaching medical students or residents. For instance,

educational case reports have a specified manuscript type in some journals (e.g., *Teaching and Learning in Medicine*), while several other medical education journals have manuscript categories that will consider manuscripts that are essentially educational case reports (e.g., *Innovation Reports*). To the extent that the nature of traditional case reports in clinical medicine differs from that of case studies in the discipline of education, one might suggest that medical education case reports could borrow the most useful guidelines from each field.

Academic Psychiatry includes among its types of manuscripts Educational Case Reports, which previously were subsumed under the educational resources’ column [2]. From 2014 to 2021, the percentage of this manuscript type has averaged 12% of the total published articles of all types in the journal. The acceptance rate is similar to the rate for all peer-reviewed articles in the journal. The exact nature of the articles in this manuscript type has evolved over time, as have the associated instructions to the authors. In recent years, the editors have encouraged, through the editorial process and suggested revisions, educational case reports to follow the description in this editorial. In what follows, we attempt to clarify further their current purpose, style, and format.

Purpose

The following text is found in the instructions for authors of *Academic Psychiatry* [3]:

Educational case reports are practical in nature and might analyze, descriptively or ethnographically, how a particular teaching practice was applied in a specific setting. Examples include unexpected and subtle discoveries made while developing an innovative teaching method, reforming a curriculum, or launching a new course. A holistic review process considers that case reports in education tend to be naturalistic and relatively lacking in empirical data, but outcome data are still

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expected, such as qualitative or quantitative participant feedback. Quality of data, novelty of the case, and topic significance will be considered.

Comparison with the Journal's In Brief Report category will be valuable. Both Educational Case Reports and In Brief Reports might be used to describe a novel teaching intervention implemented at a single site or institution. The In Brief Report would be most appropriate when the authors wish to focus on statistical analysis of the outcome measures. By contrast, an Educational Case Report would be chosen when the authors believe that the primary goal of publication is to share lessons learned from the process of defining the need, creating the intervention, overcoming the challenges in implementation, or interpreting ambiguous outcomes. It is important that the authors identify which of these (or other) kinds of lessons their case report is meant to illustrate.

A number of educational case report manuscripts are rejected by *Academic Psychiatry*, unfortunately, due to a frequent misunderstanding that the main objective of publishing an educational case report is to disseminate and share a course curriculum, created by the authors, absent outcomes other than student satisfaction. Sharing of curricula is a worthy objective, sparing others the task of creating the same curriculum on their own, but it is not the purpose of this manuscript type. Dissemination of one's curriculum might be better accomplished by submission to websites that have a review process for curricula and regularly post them (e.g., MedEdPortal [4] and the website of the American Association of Directors of Psychiatric Residency Training [5]). The authors may list these peer-reviewed postings on their curriculum vitae.

Academic Psychiatry has been publishing fewer and fewer case reports that present new curricula, for several reasons. First, page and space limitations prevent the inclusion of particulars necessary for the dissemination of a curriculum in detail. Second, the journal's reviewers evaluate submissions on the basis of their expertise in medical education and not in the content area of the curriculum being described in the manuscript. For example, if an author wants to share a model curriculum for teaching emergency psychiatry, a curriculum reviewer would be needed to assess whether the content about emergency psychiatry was accurate, appropriate, and acceptable for wide dissemination. *Academic Psychiatry*, however, does not provide reviews in subspecialty content areas, like emergency psychiatry; reviewers instead are asked to assess manuscripts on the basis of what they impart to the reader about medical education. Educational case reports about an emergency psychiatry curriculum should describe lessons learned about education, like difficulties in implementing the curriculum, how students reacted to the teaching methodology, the use of simulation, and educational outcomes. The fact that the curriculum, in this example, is about emergency psychiatry is somewhat incidental to these tasks. Of course, the

content of the curriculum is of importance, but it only needs to be described to the extent necessary to explicate the educational lessons and observed outcomes.

Style

By definition, an educational case report is usually about one "subject" (or at most a few in a multiple case report) whose case is described and studied with rich details. Educational case reports often use methods that are more qualitative and descriptive, in contrast to surveys or trials, which collect more superficial quantitative data from large samples that are amenable to statistical analysis and generalizable to populations. Thus, an educational case report may be idiographic, or even ethnographic, in style in order to tell the story of its singular subject. Akin to most qualitative research, educational case reports are more naturalistic in design, highly influenced by the specific context or single setting. They are generally narrative in style, since they tell the story of why the authors made the educational intervention and how the process played out.

Here, we may find some divergence in style between case reports in education from those in clinical medicine, in which clinician authors might frame the report as quasi-experimental and hypothesis-driven. For instance, the clinician may use the subject as his or her own control, involving periods on a medication, then off the medication, and finally back on the medication, and correlating symptom changes with these periods. Symptom severity might be given numerical ratings represented with descriptive statistics. Despite the disadvantage of having only one subject, many clinical case reports have been written in this manner and have been valuable, leading to larger quantitative studies.

Authors of educational case reports may want to continue in this clinical case report style but should also feel free to infuse elements of style from qualitative research traditions. This approach is appropriate for educational case reports due to their greater complexity. In particular, the subject is generally not a person, as in clinical cases, but rather, the unit of study is more often an educational intervention (e.g., course, curriculum, initiative). In telling the "story" of an intervention, the authors need to define clearly its boundaries [6]. Unlike a person who has easily understood physical boundaries, educational interventions need borders drawn between the subject of the report and the context in which it is embedded. For instance, in studying educational outcomes, is one looking at the effects of a single exercise embedded in a session, of a session embedded in a course, or of a course embedded in a curriculum, and how does one separate the effects of each? Which is the subject—the exercise, the course, or the curriculum? These important questions might use qualitative methods by including the learners in a focus group and

understanding how the teaching intervention was understood and potentially assimilated into practice.

Additionally, the context surrounding the educational intervention is usually complex in the academic world, with multiple learners and many uncontrollable and unpredictable influences, perhaps more so than in clinical settings with one patient and pure pharmacological treatments. This context may include details that are not content-specific: whether attendance is required and consequences exist for not attending; whether advance readings for a flipped classroom model are reviewed by learners; if faculty are given protected time or paid for teaching and the course is given protected hours of instruction by the administration; how grades are determined; and other details often omitted in descriptions of model curricula. These factors influence the quality and effectiveness of education, such that the same curriculum delivered in two different contexts may have quite different degrees of success or failure, and may help readers to decide whether to adapt a described educational intervention in their institution (e.g., depending on resources).

The qualitative part of an educational case report should interrogate the “how” and “why” of the case [7]. Many authors overemphasize the “what,” the content of the curriculum, and focus on whether the “what” was effective, usually with learner satisfaction surveys. While this formula has resulted in some perfectly useful case reports, we do not think it leverages the strengths and potential of an educational case report. More valuable are the “how” (e.g., learning process) and “why” (e.g., mechanisms of learning) questions with regard to learning processes and speculation about mechanisms and causation. Readers may find transferability of some of these processes and mechanisms to their context. Of note, the “how” may include unanticipated and/or unpreventable changes or challenges relating to the educational intervention, occurring during the period of study, which may lead to modification of the intervention midstream. In clinical trials, this occurrence is undesirable, because conditions of the trials will then change, but in an educational case report, describing such changes gives a sense of the forces impinging on the intervention and its ability to adapt to them, which offers lessons learned along the way and the attempts to redirect efforts.

Format

Many educational case reports describe a new course or curriculum designed in response to an educational need or gap in knowledge, skills, or attitudes. The report should start with evidence of this need and gap based on review of the literature (or lack of evidence in the literature), current existing solutions and how they have failed to date, and the authors’ innovative answer. Next, the educational intervention may be outlined; the content of the intervention (e.g., topics,

assignments) need not be fully specified but can be shared in an abbreviated form. Particular attention should be drawn to defining the boundaries of the intervention, as alluded to earlier, and its context, along with how it is innovative. Assessment and qualitative measures, and possibly quantitative methods, used should be described that establish the educational outcomes. If quantitative methods are used, their validity needs to be addressed. Study data are then presented along with a narrative of what happened during the study, from start to finish. This text should include how the intervention ran, observation of learning processes, barriers, modifications, and changes that were required and the reaction to them, educational outcomes, and final impact and scalability. Additionally, inclusion of student perspectives, perhaps more than simple comments from evaluations, should be considered. Lessons learned along the way, propositions about how and why the outcomes came to be, and questions raised with novel perspectives should be proposed and critically argued in the conclusion. Mentioning limitations and the potential existence of multiple explanations, unsettled ambiguities, and researcher bias is also important.

The issue of informed consent and ethics review should be addressed. The manuscript should indicate the conclusions of an Institutional Review Board (IRB) review of the case report study and data to be published (e.g., exempt from further review status, approved). The IRB can advise about whether informed consent for being in the study is necessary, and the release of the case report should be considered from *both* the faculty members and learners.

As mentioned earlier, educational case reports may benefit from a hybrid of the styles from clinical case reports and qualitative reports. Various standardized formats for clinical case reports have been published. An international group developed the CARE (C*A*se R*E*ports) guidelines for clinical case reports [8], and it is useful for authors to be aware of these. Several tools are provided with the CARE guidelines for authors, including a checklist for writing clinical case reports. Listed are traditional elements like clinical findings, diagnostic tools, treatments, and follow-up and outcomes. Of note, the guidelines include prompts to incorporate instruments measuring treatment adherence and side effects, explaining alteration of the treatment plan, and presenting a rationale for the clinical conclusions. Also requested is the treatment perspective of the patient and obtaining the patient’s informed consent for release of the case report. The CARE guidelines are best suited for clinical case reports, but authors may wish to adapt some elements to educational case reports, such as using tools to measure compliance with and acceptance of the educational intervention, explaining changes in the curriculum during the study, and describing a rationale for educational conclusions and lessons learned.

Authors may want to also consider formats designed for presentation of qualitative research. The Standards for

Reporting Qualitative Research (SRQR) enumerates 21 points that should be covered [9]. Educational case reports may illustrate outcomes with qualitative methods like focus groups, interviews with learners and faculty, observations of the learning process, and textual analysis [10], which would provide a higher level of evidence and iterative data analysis than afforded by the use of Likert-scale student satisfaction questionnaires. SRQR endorses increasing trustworthiness and credibility with conclusions based on triangulation from more than one data source and providing transparency about any author's attributes that might have biased the data gathering, analysis, and transferability. The application of advanced design and methods in case study research, used in education at large, may be found elsewhere [7].

In Summary

Educational case reports are an important manuscript type and have been wonderful contributions to *Academic Psychiatry*. Educational case reports have followed the tradition of clinical case reports in medicine, which have a long history and have sometimes become early progenitors of novel perspectives and discoveries about disease and treatment. We suggest that educational case reports may also benefit from borrowing from the tradition of case studies in the field of education at large, which are considered as a form of qualitative research. In other words, educational case reports in medicine can take advantage of a hybrid style, combining elements from both clinical case reports and qualitative research studies, in proportions determined by the author fitting for the case.

Qualitative approaches and methods are useful in dealing with the great complexity of educational interventions and the contexts in which they are implemented. Qualitative writing encourages telling the story of the intervention in rich and deep detail over the course of the study, developing propositions of how and why the intervention's processes and outcomes unfolded as they did. Therefore, one consideration for education researchers and perhaps for psychiatry in general is greater attention to teaching qualitative methods, as these have a rich foundation and are particularly applicable to psychiatry as a field. As a foundation, the format might adapt the relevant

elements of a clinical case report, as described in the CARE guidelines. Then, authors who want to elaborate on the qualitative research features of their report may add in more rigorous qualitative methodologies, paradigms, and reporting standards. We are delighted to continue the fine tradition of *Academic Psychiatry* publishing educational case reports, and we look forward to your submissions.

Declarations

Disclosures On behalf of all authors, the corresponding author states that there is no conflict of interest.

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