Case studies and series have several important functions such as illustrating models for assessment and intervention, describing new clinical challenges and phenomena, including outcomes of treatments for rare conditions or clinical presentations, documenting the feasibility and preliminary efficacy of innovative interventions, and extending the clinical effectiveness and generalizability of empirically supported interventions and evidence-based assessment (Drotar, 2009a, 2010). A previous editorial issued an invitation to authors for submissions of case studies to the *Journal of Pediatric Psychology* (JPP) and suggested strategies to enhance their publishability (Drotar, 2009a). Since then, we have seen an increase in submissions and successful publication of case studies on such topics as multisystemic therapy to reduce HIV transmission risk behavior (Letourneau, Ellis, Naar-King, Cunningham, & Fowler, 2010), behavioral sleep interventions for autism and primary insomnia (Moon, Corkum, & Smith, 2011), and acceptance and commitment therapy to enhance psychological adaptation to pediatric sickle cell disease (Masuda, Cohen, Wicksell, Kemani, & Johnson, 2011).

Our experiences in reviewing case study submissions and working with authors in revising their manuscripts have underscored significant challenges in writing and reviewing case studies including confusion about specific information that should be included in the report, how it should be organized, and how case report submissions should be evaluated. To facilitate authors’ tasks in preparing case studies and reviewers’ tasks in reviewing them, the purpose of this article is to provide additional guidance for submissions of case reports and series and for reviews of such manuscripts. This guidance pertains to case reports that have a narrative format and present data on clinical outcomes as well as those that utilize single subject methodology and designs. The latter also require specialized data analytic methods (see Rapoff & Stark, 2008 for a description).

**Orientation for Preparation of Case Studies**

Controversy exists concerning the importance and validity of case studies and the types of case studies that are most useful (Dattilio, Edwards, & Riohman, 2010). The approach that is most relevant for publication in JPP follows guidance for systematic case studies (Fishman, 2005; Kazdin, 2003; Peterson, 1991), including: (a) gathering descriptive and outcome data systematically in a planned manner, (b) conceptualizing the case based on theoretical orientation and with supportive evidence, (c) formulating clinical hypotheses to guide a treatment plan, (d) describing treatment in detail, (e) monitoring treatment progress with validated measures, and (f) separating descriptive observations of treatment process and outcome and inferences about change (Kazdin, 2003; Peterson, 1991).

Kazdin’s (2003) cogent discussion of drawing valid inferences from case studies articulates the characteristics of cases that authors might consider (e.g., nature of data and method of assessment, stability of target clinical problem, nature of intervention effects, and number of cases reported) in reference to specific threats to internal validity posed by case study data including history, maturation, testing, and statistical regression. For example, the internal validity of case reports are enhanced to the extent that: (a) there is empirical evidence for the course (and health consequences) of a clinical problem in the absence of...
treatment; (b) the treatment effect occurs immediately, is large, clinically significant, and of significant duration; and, (c) more than one case is described (Kazdin, 2003). Both Peterson’s (1991) and Kazdin’s (2003) recommendations are in stark contrast to case descriptions that rely on the therapist’s memory without an objective account, include a limited description of outcome without independent, valid measures, do not provide contextual information to allow readers to evaluate inferences that are made and fail to consider alternative explanations or threats to validity (Hersen, 2002; Messer, 2007).

Deciding Whether to Submit a Case Study Manuscript

Deciding whether a case study or series should be submitted for publication can be difficult. Key factors in this decision include the clinical and/or significance of the case and the findings, clarity of methods, innovation of the approach, quality and extensiveness of outcome data, and clinical utility. In order to help make the decision about submitting, prospective authors may wish to send their manuscripts to colleagues for their opinions concerning significance, innovation, clinical utility, and methods. The failure to establish significance, absence of clear documentation of methods, and inadequate documentation of outcome are among the primary reasons that case study manuscripts are rejected.

Key Sections of a Case Study Manuscript

A case study includes three core sections: introduction, case description, and discussion. Specific features of each of these sections that should be considered by authors in preparing such manuscripts and reviewers in evaluating the quality of the submission are described in Table 1 and highlighted below. Case study manuscripts are full length submissions.

Introduction

Establish the Significance of the Case Report in the Context of Previous Work

A carefully constructed and convincing introduction will set the stage for an effective presentation of the case and discussion of clinical and research implications for the field of pediatric psychology. On the other hand, an ambiguous, unconvincing introduction will not engage readers. In order to meet the challenge of establishing the significance of the case report, it is important that authors start with a clear focus and purpose of the report. Authors have any number of options to describe the focus and significance of a case report or series (Drotar, 2009a; Drotar, LaGreca, Lemanek, & Kazak, 1995). These include (among others) describing the feasibility and preliminary efficacy of a new treatment method, demonstrating the generalizability of an available, empirically supported intervention to a new clinical population or setting, a challenging or rare case, or illustrating the value of an empirically-validated measure in clinical practice, etc. (Drotar, 2009a).

The introduction can articulate the potential innovation and significance of the case for the field of pediatric psychology by carefully reviewing what is known and not known on the topic and noting specifically how the case adds to new scientific knowledge and/or practice wisdom beyond what is already known. As is true for any manuscript (Drotar, 2009b), authors should not assume that reviewers will immediately grasp the significance and innovation of the case and relevant data. Authors can help reviewers appreciate the significance of their case report if they: (a) describe the importance of the clinical population including associated psychological or health-related morbidity that is the focus of their report, (b) identify relevant limitations of current knowledge and/or practice pertaining to the case, (c) document the need for the intervention or assessment method that is presented, and (d) articulate how their report will advance clinical practice and/or science.

In developing their introductions, authors may wish to address the following questions: “What is the clinical significance of the case? How will publication of this case advance the clinical practice of pediatric psychology? How would publication of this case facilitate integration of research and practice?” Finally, the introduction to the case should describe relevant hypotheses.

Case Description

Case descriptions of intervention should include the following areas: (a) referral problem and patient/family background; (b) methods of assessment, diagnosis, and relevant baseline data; (c) conceptualization of case, treatment plan, and therapist information; (d) treatment course and process; (e) data on outcome, including follow-up; and (f) relevant ethical and human subjects considerations.

Clinical Setting

Readers and reviewers are interested in understanding the setting in which the patient presented and was seen for assessment and/or treatment in order to compare and contrast it with their own experience. For this reason, it is useful for authors to let readers know whether the case presented in an inpatient or outpatient setting, whether
this was a specialized clinical program (e.g., diabetes clinic), and other relevant features of the clinical context (e.g., small vs. large center or practice).

Presenting Problem and Patient/Family Background
Information concerning the nature of the referral problem, including clinically relevant comorbidities, how this case was selected to be presented, and whether it was typical of others seen in the setting are also very helpful to readers. Finally, a brief description of the family history, demographics, ethnicity and cultural background, and the child’s medical status (e.g., nature of chronic condition, duration and severity, and treatment) will help readers and reviewers appreciate how the patient and family that is described in the case report compare to those seen in their respective settings.

Methods of Assessment and Diagnosis
It is very useful for authors to inform their readers about specific assessments, including standardized measures that were conducted to facilitate treatment planning, the rationale for their inclusion, and the relevant Diagnostic and Statistical Manual (DSM-IV; American Psychiatric Association, 2000) diagnosis that was made (if it was made). A description of baseline data concerning relevant targets of intervention, including functional or health-related impairments that may be associated with the clinical problem of interest, is particularly important: Such description will help reviewers and editors to appreciate the clinical significance of any changes that occurred during or subsequent to the intervention that is described. For example, if the target of the intervention was depressive symptoms, it is very important for readers to know whether the symptoms were above the clinical cutoff for the measure at
baseline. If the target of the intervention was treatment non-adherence, evidence that nonadherence is affecting medical management and/or other clinically relevant health outcomes will enhance the clinical significance of changes that occur in response to intervention.

Baseline Data
An important aspect of case studies that can be overlooked by authors but is critical in evaluating change is the quantity and quality of baseline data. The more objective data and time points that describe primary clinical outcomes that are available at baseline, the easier it will be for authors to present convincing data concerning changes in outcomes that occur subsequent to treatment (Borckardt, Nash, Murphy, Moore, & O’Neil, 2008).

Conceptualization of Case and Treatment Plan
Due to their complexity, clinical cases may require practitioners to depart from protocols that involve empirically supported interventions. For this reason, reviewers need to understand authors’ reasoning and decision making about clinically relevant issues in their cases, including the rationale for selection of targets for intervention, development and selection of treatment plan, and decisions that were made during the course of treatment. Relevant theory and models of intervention that guided the authors’ approach to the case are particularly important to include in this section.

It is also very helpful for authors to inform readers whether alternative models of treatment were considered and the rationale for selection of the specific model of intervention that was utilized. Reviewers are also very interested in understanding any other features of the case presentation, history and family background, and baseline data that authors considered in guiding their case formulation and selection of treatment.

Treatment Course and Relevant Process
The quality and depth of authors’ description of the treatment/intervention that was conducted and relevant clinical process course are critical for two main reasons: First, readers and reviewers need to understand the core features of the intervention method that were applied in the case study or series in order to evaluate their clinical and scientific significance. Moreover, a clear, detailed description of the assessment and/or intervention methods employed is critical to help others apply and replicate the procedures in their clinical work and/or research. Replication of case descriptions of intervention is just as important as it is for any other study (Drotar, 2010a). Key elements of a comprehensive case description include: (a) number and spacing of sessions; (b) duration of treatment; (c) family participants; (d) therapist training and background (including any specialized training that was necessary to conduct treatments or assessment); (e) core content and structure of sessions; and (f) relevant clinical process, including acceptability of the treatment to child and family and departures from the model of treatment that were deemed to be necessary.

A great deal of information regarding the content and process of treatment is often available. However, authors need to focus their description of the case and select the information that is most relevant to the purpose and focus of their manuscript and can be operationalized objectively. Information such as handouts, educational materials, and especially treatment manuals can also be very helpful in describing the content of the intervention and facilitating potential replication and clinical applications in other settings. To facilitate such dissemination, such materials should be submitted as supplementary material along with the manuscript to be posted on the JPP website (http://jpepsy.oxfordjournals.org/) when the article is published.

Given that the course of treatment conducted in the real world of clinical care frequently does not turn out as anticipated, practitioners may need to modify their initial treatment plans. In this regard, one of the most valuable features of case reports can involve a detailed description of changes that were made to an empirically supported intervention to enhance the generalizability to challenging cases. In order to help readers appreciate such changes and their potential impact on clinical process and outcomes, authors should consider the specific challenges that were encountered in the course of treatment, how they were managed, relevant changes made in the treatment plan over the course of treatment, and the rationale for making them. Not uncommonly, the process of clinical intervention may be characterized by identifiable stages (e.g., those that target different processes or outcomes) that can be characterized.

Study Design and Analysis of Data Concerning Treatment Outcome
One of the most important features in determining the publishability of a case study manuscript is the quality and clinical significance of available data on treatment outcome and the analyses of change in response to intervention. Study design, selection of measures, and data analyses in case studies are very challenging but are often critical to a successful publication. For this reason, authors may wish to involve colleagues with experience with such analyses to collaborate. As is true in any study, it is very helpful for authors to inform readers about the study
design and specific hypotheses concerning anticipated change on specific measures, describe the rationale for these hypotheses, and structure their presentation of data around them (Drotar, 2009b).

Authors who have the opportunity to evaluate outcomes of their cases using methods based on single subject design methodology (Rapoff & Stark, 2008) will have a special advantage for publication. However, such methods are not always possible to implement in the context of clinical care. Consequently, many case studies will employ some version of a pre–post treatment study design to evaluate outcomes. However, pre vs. post-treatment study designs vary in the quality and extensive variability of data that are gathered. Authors who have gathered extensive baseline data via objective measures will have an advantage in convincing reviewers that meaningful change has occurred in response to intervention (see previous section). Authors should consider applications of time series analysis to their data based on useful published guidance on this topic (Borckardt et al., 2008; Smith et al., 2010).

Ideally, two types of data on the outcomes of intervention should be presented: (a) data on the statistical significance of change (including effect sizes and confidence intervals) in primary or secondary outcomes including psychological data (e.g., depressive symptoms), health outcome (e.g., symptoms, valid biomarkers such as HbA1c), functional outcome (e.g., health-related quality of life), or health-care utilization and (b) data on the clinical significance of change in outcomes.

Authors should consider several options for evaluation of statistical and clinical significance (see Rapoff, 2010 for a discussion of methods to enhance clinical significance and social validity of intervention research): Comparison with test norms pre vs. posttreatment can be used for those measures of treatment outcome with established clinical cutoffs. The use of the Reliable Change Index (Jacobson, Roberts, Berns, & McGlinchey, 1999; Jacobson & Truax, 1991) or the Standard Error of Measurement (Eisen, Ranganathan, Seal, & Sprio, 2007) can determine whether change is reliable. Other methods that are helpful for evaluating clinical significance concerning health-related quality of life outcomes, such as patient recognition of a minimally important difference (Wyrwich et al., 2005). Authors who have cases with sufficient baseline data might consider time series methods such as autoregressive moving average methods that take autocorrelation into account (see Borckardt et al., 2008 and Hilliard, Ramey, Rohan, Drotar, & Cortina, 2011, Submitted for publication). Finally, in some cases, quality improvement methods such as statistical process control (Plsek, 1999) might also be considered to clarify the description of change in application of methods (e.g., assessments and intervention in specific settings) (e.g., Ernst et al., 2010).

Authors may have access to multiple process and outcome measures in evaluating the outcomes of their intervention. In such instances, as is true for any study, it is important to distinguish between primary outcomes that are the targets of intervention and secondary outcomes and to develop a priori hypotheses for each. Changes in clinically relevant health outcomes including biomarkers of clinical outcome (e.g., glycemic control in diabetes), symptoms, or health care utilization (e.g., emergency room visits or hospitalization) will also help to establish the clinical significance of intervention-related change. In designing and implementing their case studies, authors may also wish to consider outcomes such as patients and parents’ ratings of the degree and importance of change or measures of the social impact of change (Kazdin, 1990; Rapoff, 2010). Finally, data concerning clinically relevant process measures such as the quality of the treatment alliance, treatment attendance, or barriers to intervention that were shown to be responsive to change may be very important to consider, especially in evaluating the acceptability, feasibility, and impact of the treatment.

Another important issue that needs to be described is the length of the posttreatment follow-up period. Authors often ask the question: what duration of follow-up is necessary? The short answer is the more data and the longer treatment outcome period, the better. The duration of clinical intervention effects for various clinical problems is an important but as yet unanswered question in the field of pediatric psychology (Kahana, Drotar, & Frazier, 2008). Data from case studies can provide important data on this issue. Treatment effects are not always sustained or may be sustained in some clinical outcomes but not others.

In practice, the length of the follow-up period may be dictated by what is possible in the clinical setting. Nevertheless, authors who are considering submissions of case reports should plan to obtain as much follow-up data as possible and if necessary recontact patients and families to obtain additional data.

Ethical and Human Subjects’ Considerations

Institutional review boards (IRBs) differ with respect to whether case reports and case series involving various numbers of participants are considered human subjects research and the criteria that they apply to make this determination. For this reason, authors should consult with their IRB concerning specific policies that need to be followed in publishing case studies and series and document that they have done this in their method.
Other important ethical considerations include protection of patient anonymity while retaining essential case information and obtaining parental consent for publication (International Committee of Medical Journal Editors, 1995).

Discussion
Clarifying the Innovation, Significance, and Impact of the Findings

For maximum impact, the discussion of the potential innovation, significance, and impact of the case study method and findings should be closely integrated with the key points that were established in the introduction and described in case description and outcomes (Drotar, 2009a). The impact of the case report/series will be enhanced if authors focus their discussion on the most important “take home” messages, synthesize important information, and emphasize the new implications for integration of research and practice rather than repeating information from the introduction and findings that were previously presented (Drotar, 2009b). Case studies that have implications for multiple audiences are particularly significant. The most convincing implications of case reports will appeal primarily to practitioners but may also have implications for researchers and potentially for practice and policy concerning the development and implications of clinical programs.

Each and every discussion section needs to be tailored to the unique issues and findings of the manuscript. Case study and series manuscripts are no exception. Authors may wish to address some of the following important questions/themes in their discussion of case studies that may pertain to their cases.

What Specific Recommendations are made for Research, Practice, and/or Policy?

Perhaps the most important of the take home messages that authors can deliver to reviewers and readers involve specific recommendations to enhance research, practice, and/or policy. The recommendations that are most appreciated by practitioners focus on specific patients that can benefit from the intervention that is presented and how they can access the information needed to implement the treatment (online supplementary data are very helpful in this regard). Researchers are most interested in learning about innovative interventions that have shown promising findings that may be tested in clinical trials. Administrators and policy makers want to know about interventions that can have an impact on children’s health care outcomes and can be implemented in clinical care at reasonable costs. For this reason, authors of case reports may also wish to consider relevant implications of their work for program development including reimbursement and economic costs vs. benefits.

What Generalizable Lessons Were Learned About The Application of Empirically Supported Treatments?

Reviewers of case studies can be engaged by the authors’ critical appraisal of lessons learned in the course of implementing their interventions that can inform future work. For example, empirically supported interventions have been validated on specific, highly defined, populations with restrictive criteria and do not necessarily generalize to practice (Drotar & Lemanek, 2001). For this reason, case studies can play a valuable role in helping researchers and practitioners to understand the specific boundary conditions (e.g., comorbid problems, ages, culture, and ethnicity) of populations for which empirically supported interventions can be implemented, barriers to implementation in clinical practice, and ways of managing them in individual cases. For example, case studies that demonstrate applications of empirically supported interventions for children with complex comorbid psychological or physical conditions or children with diverse ethnicities and cultures are particularly valuable.

What Interventions Are Effective In Clinical Care and Should Be Tested in Research Studies?

The traditional model of translating research into practice begins with randomized controlled clinical trials (RCTs) and ends with translation of the findings from RCTs into clinical practice with interventions for pediatric behavioral and mental health problems. However, this traditional model has been limited by substantial problems in translation and dissemination into practice (Jensen, Hibbs, & Pilkonis, 1996; Kazdin, 1995; Weisz, 2000). Some empirically supported treatments are never implemented routinely in pediatric psychology practice settings because they are too lengthy or burdensome or because they are not applicable to the complex patients seen by practitioners (Drotar & Lemanek, 2001). Case studies provide a way to identify those new models of intervention or adaptations of available methods that are most effective in clinical practice with complex patients. If these methods are found to be consistently effective in practice settings, they may be tested in larger trials (Weisz, 2000; Weisz, Sandler, Duralk, & Anton, 2003). In addition, Dattilio et al. (2010) have described an interesting approach that combines data from RCTs with systematic case studies that warrants application in the field of pediatric psychology in...
order to facilitate integration of research and practice (Drotar, 2010b; Drotar & Lemanek, 2001).

**Describing Caveats and Limitations of Case Studies**

Practitioners are interested in benefiting from the specific lessons learned from published cases that can be applied to their practices. For this reason, authors would be well served to describe the practical issues that need to be considered by practitioners in applying their method (e.g., specific features of patient, family, or setting characteristics that either enhanced or limited the application of treatment, reimbursement, therapist training, etc.).

Relevant practical and methodological considerations in data collection should also be considered by authors. Even very well-conducted case studies and series have limitations in internal validity of findings as well as generalizability to different populations. For this reason, the degree to which authors have articulated the limitations of their case reports and specific implications and recommendations for improving the quality of the methods employed in future research is an important consideration in the review process (Drotar, 2009a).

**Final Comment**

I hope that this guidance will be helpful to authors in submitting their case reports to JPP and for reviewers in evaluating the quality of their submissions. Case reports have a continuing role to play in developing clinically relevant science and practice in the field of pediatric psychology. Case study manuscripts provide a way for practitioners to contribute to science, disseminate, and replicate their contributions (Drotar, 2010a), and facilitate much needed integration of research and practice in the field of pediatric psychology (Drotar, 2010b; Drotar & Lemanek, 2001). We invite authors to contribute to developing this knowledge base and reviewers to contribute their expertise to improve the quality and utility of published case reports in JPP.

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