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REVIEW ARTICLE

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American Psychological Association practice guidelines for psychopharmacology: Ethical practice considerations for psychologists involving psychotropic use with children and adolescents

Susan G. Goldberg[1] | Kathryn Wagner[2]

[1]Department of Psychology, Duquesne University, Pittsburgh, Pennsylvania

[2]VA Medical Center Mental Health Clinic, Washington, District of Columbia

Correspondence
Susan G. Goldberg, Department of Psychology, Duquesne University, 204 Rockwell Hall, 600 Forbes Ave, Pittsburgh, PA 15282.
Email: goldbergs@duq.edu.

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Abstract

Objectives: This study discusses the implications of the American Psychological Association's 2011 Practice Guidelines for Pharmacology as they apply to psychologists working with juvenile clients. Special considerations apply due to concerns about the developmental side effects that occur when psychotropic medications are prescribed to children and adolescents.

Methods or Design: This study provides recommendations for implementing each of the Practice Guidelines. Constructive criticism of the Practice Guidelines is also discussed with the aim of improving service delivery.

Results: This study provides specific recommendations for psychologists regarding obtaining adequate knowledge about psychopharmacology to inform clients or consult with physicians. Suggestions are made for continuing education requirements for psychologists who work with juveniles.

Conclusions: Recommendations are made for psychologists working with juveniles to increase their knowledge of psychotropic medications for a more ethical and informed voice regarding the prescribing of such medications.

KEYWORDS
adolescence, child clinical psychology, ethics, prescriptive authority, psychopharmacology

1 | INTRODUCTION

This study addresses Practice Guidelines issued by the American Psychological Association (APA) in 2011 for psychologists involved in pharmacological issues (American Psychological Association, 2011; hereafter, the "Practice Guidelines"). The Practice Guidelines (developed by APA's Pharmacology Division Task Force) outline considerations for both prescribing and nonprescribing psychologists when working with or assessing clients who are taking psychotropic medications. Although the Practice Guidelines are addressed to psychologists who work with all clinical populations, they do not explicitly state the specific challenges that arise when working with children and adolescents who have been prescribed psychotropic medications. They simply state that the Practice Guidelines should "provide a resource to psychologists interested in the issue of what represents optimal practice in relation to pharmacotherapy" (American Psychological Association, 2011, p. 835). Our article aims to highlight the importance of paying particular attention to the Practice Guidelines when working with the juvenile population.

By way of background, it should be understood that the practice of psychology is governed by several entities, such as state licensing boards and the APA. Whereas state licensing boards designate the education, training, and experience required for psychologists (Nelson, 2007), APA establishes nationwide standards for ethical practice (American Psychological Association, 2017/2002). The Ethics Code published by APA contains both standards and guidelines for practice (Heilbrun, Phillips, & Thornewill, 2016). While the standards are enforceable by state and national laws, APA guidelines are aspirational, meaning that they are in place to help psychologists aspire to the highest ethics possible (American Psychological Association, 2011, 2017/2002, p. 2). Clinical guidelines apply to a specific disorder or treatment modality and practice guidelines apply to a specific domain of practice (American Psychological Association, 2011). The APA has a procedure for establishing "specialty" areas and "proficiency" skills; developing such specialty areas and proficiencies is a complex and time-consuming process (Commission for the Recognition of Specialties & Proficiencies in Professional Psychology, 2011; Lowman, 2003).

With respect to psychopharmacology, some states provide psychologists with prescribing privileges, a controversial topic in the medical field (Heiby, 2002; Johnson, 2009; Levine & Schmelkin, 2006; McGrath, 2010). The authors of the Practice Guidelines did not enter that debate, electing instead to provide recommendations applicable to both current and future prescribing and nonprescribing psychologists (American Psychological Association, 2011). Although Barnett and Neel (2000) believe that all psychologists should have some knowledge of psychopharmacology, their argument was made in 2000 before the publication of these Practice Guidelines. Thus, the current literature on this topic is outdated and in need of further research. While we do not directly situate our article within the debate surrounding prescription privileges, it is our hope that the following discussion will open a path for further conversation about ethical psychotropic medication use in children and adolescents.

Psychologists who encounter juveniles being prescribed psychotropic medication do so in many areas of professional activity, such as in individual, group, or family therapy; medical hospital settings; psychiatric inpatient hospital settings; outpatient psychiatric clinics; school settings; interdisciplinary agencies; juvenile courts; or through referrals for psychological assessment (Anderson, Chen, Perrin, & Van Cleave, 2015; Kazak & Noll, 2015; Marsh, 2004; Reardon et al., 2017). The variety of professional settings in which psychotropic medications might be prescribed is particularly true for psychologists who work with juveniles (Drotar, Sturm, Eckerle, & White, 1993). The setting in which psychologists practice impacts all the Practice Guidelines. For example, Practice Guidelines 16–17 urge psychologists to establish collaborative relationships with physicians and other professionals, which may be easier to implement in a multidisciplinary agency settings than in private practice.

Our goal is to articulate both practice-related and ethical issues regarding psychopharmacology for nonprescribing psychologists who work with juvenile clients (for the purposes of this paper, the term juveniles refers to both children and adolescents). We contend that special circumstances exist in which psychologists would benefit from having psychopharmacological knowledge. Although other professions, such as school psychologists and psychiatrists, have made conclusions about the need for pharmaceutical knowledge in mental health professions (American Academy of Child & Adolescent Psychiatry, 2008; American Academy of Child & Adolescent

Psychiatry, 2009 Walkup, 2009; Shahidullah, 2014), there has been little effort, as of yet, to apply these Practice Guidelines to the clinical psychologists working with juveniles (see Shahidullah, Hostutler, & Stancin 2018). Further, our article provides information and critiques about each of the Practice Guidelines as well as additional recommendations for education and practice.

We begin with a brief literature review on the recent usage rates of psychotropic medications with the juvenile population and then discuss each of the APA Practice Guidelines as they apply to work with this population. We offer suggestions for nonprescribing psychologists regarding increasing psychopharmacology knowledge, as well how to effectively navigate conversations about medications with prescribers and families.

2 | BACKGROUND USAGE TRENDS

The urgency of these considerations emerges from the rapid increase in prescription of psychotropic medications to juveniles in the last two decades (Olfson, Druss, & Marcus, 2015). One study found a six-fold increase in doctors' visits for juvenile antipsychotic prescriptions between 1996 and 2002 (Olfson, Blanco, Liu, Moreno, & Laje, 2006). A few years later another study concluded that the increase had jumped to 75% (Comer, Olfson, & Mojitabai, 2010). Ninan et al. (2014) noted that between 1996 and 2008, prescriptions of multiple psychotropics for children increased from 14.3% to 20.2%. Moreover, recent studies indicate a significant increase in the use of dual or multiple psychotropic medications for juveniles (Comer et al., 2010). For instance, in a large scale meta-analysis, Olfson, Crystal, Huang, and Gerhard (2010) found that nearly 80% of the preschool children on antipsychotic medications were also taking other psychotropic medications. It is also important to note that prescribers from different professions may vary with respect to the quantity of medication they prescribe (e.g., primary care doctors may prescribe some medications more frequently than psychiatrists; Anderson et al., 2015).

Of particular concern is that much of the increase in psychotropic medications prescribed to juveniles involves antipsychotic medications, particularly, atypical antipsychotic medications, also called second-generation antipsychotics, which are often preferred over first-generation antipsychotics because of fewer extra-pyramidal side effects (Sohn, Moga, Blumenschein, & Talbert, 2016; Verdoux, Tournier, & Bégaud, 2010). The prescribing of antipsychotics to children is of concern due to potential long-term physiological effects, such as weight gain and metabolic changes (Politte & McDougle, 2014). The long-term effects of psychotropic medications on physically developing children and adolescents are not fully known and concerns still remain, especially for foster children and children of low socioeconomic status (Crystal et al., 2016; Ramachandran, Banahan, Bentley, West-Strum, & Patel, 2016). Even while supporting the use of psychopharmacology—that is, recognizing the benefits of psychotropic medications in alleviating common mental health disorders, such as anxiety and depression—there exists an ongoing concern about the insufficient research on possible side effects (Loy, Merry, Hetrick, & Stasiak, 2017; Nevels, Dehon, Alexander, & Gontkovsky, 2010).

Various explanations have been provided for this increase in psychotropic medication use with juveniles, especially antipsychotic usage. These include difficulty in accessing nonpharmacological mental health services; the desire for quick and low-cost treatments; limited financial reimbursement for behavioral and psychological treatments; and few treatment options available for children in the foster care system (Crystal et al., 2016; Harrison, Cluxton-Keller, & Gross, 2012).

In the past decade, an increasing number of physicians have spoken about the unique dangers of the continued use of antipsychotics for children (Daviss, Barnett, Neubacher, & Drake, 2016; Koelch, Schonor, & Fegert 2008; Panagiotopoulos, Ronsley, Kuzeljevic, & Davidson 2012). For example, Daviss et al (2016) expressed concern about the side effects of antipsychotic medication with nonpsychotic children and urged the families to become more aware of the risks. Spigarelli (2010) called for more in-depth research, analyzing the benefits and adverse effects of psychotropic medications prescribed to juveniles. Mental health professionals generally agree that the treatment of juveniles should include psychological and psychosocial services rather than only psychiatric interventions. In the last decade, clinical

research has concluded that evidence-based therapies (such as cognitive behavioral therapy and parent–child interaction therapy) are generally preferred treatments for children with psychological concerns, and that these treatments are often more effective than stand-alone use of psychotropic medications (Daviss et al., 2016; Harrison et al., 2012). For example, Huefner, Griffith, Smith, Vollmer, and Leslie (2014) demonstrated that, due to concerns about medication side effects, instituting more behavioral options for youth with serious behavioral disorders could result in lower psychotropic medication use. However, there is not yet a clear consensus on the limits of appropriate juvenile medication use, which creates challenges for psychologists when confronted with these issues.

It is our professional opinion that psychologists who work with children and adolescents would benefit from becoming more active in conversations about psychotropic medications, as doing so would positively impact the overall care that juvenile patients receive. We also believe that psychologists have an ethical responsibility to remain current on the issues of psychopharmacology with children and should use their strong working relationships with prescribing physicians. In fact, the approach presented by APA in the Practice Guidelines is arguably necessary for psychologists to remain in compliance with the APA Ethics Code (American Psychological Association, 2017/2002). For example, Standard 3.04 of the Ethics Code requires psychologists to "take reasonable steps to avoid harming their clients…and to minimize harm where it is foreseeable and unavoidable." It could be considered a questionable ethical practice if psychologists did not provide input into medication use if they had information that could influence physicians' psychotropic choices.

In the remainder of this article, we review the Practice Guidelines with the aim of helping psychologists gain the knowledge and confidence to address ethically psychotropic medication issues with medical professionals and families of juvenile patients. We tailor our discussion of these Practice Guidelines to those psychologists who work with the juvenile population, even occasionally.

3 | PRACTICE GUIDELINES

The Practice Guidelines provide suggestions for how psychologists should interact with clients taking psychotropic medication. The introduction to the Practice Guidelines views psychologists as having three possible levels of involvement in pharmacology decisions, each level with an increasing degree of responsibility in medication management. The Practice Guidelines present the options on a continuum, with "salient steps" along that continuum (p. 835). They also recognize that some degree of ambiguity exists regarding psychologists' roles, given that psychologists often perform different functions at various points in treatment (p. 836). We will discuss each level and also reason out why these three categories may not be as lineated or as effective when working with the juvenile clients.

3.1 | Medication prescribers (psychologists with prescription privileges)

According to the Guidelines (2011), "the population of psychologists with prescriptive authority is…small, but one that is sure to increase in size in the coming years" (pp. 835–836). This study is mainly addressed to nonprescribing psychologists who work, even occasionally, with children and adolescents, as we assume that prescribing psychologists (those with prescription privileges) already follow these Practice Guidelines to some extent. For ease of simplicity and to avoid confusion, for the purposes of this study, psychologists with medication prescription privileges (prescribing psychologists) will be referred to as prescribers. Those psychologists who are not prescribers (most psychologists) will be referred to as psychologists. Other medication prescribers will be referred to as physicians.

3.2 | Collaborators

APA's next category consists of psychologists who "actively collaborate in medication decision making" (American Psychological Association, 2011, p. 836). Even though collaborators do not have ultimate decision-making control

or responsibility for the medications prescribed, they "play a substantive role in the decision-making process" (p. 836). APA's research found that although "87% of practicing psychologists reported they have been involved in the decision to prescribe medication…it is unclear what role they played in the decision" (p. 836). Indeed, there is no substantive research on the specific role that psychologists play in the decision-making process. We suspect this lack of clarity in the role may have arisen from the ambivalence some psychologists have about psychotropic medication use, which in turn may decrease their confidence in addressing the concerns with the physicians. It is our professional and ethical opinion that psychologists should obtain the necessary education regarding psychotropic medications (discussed below) and serve as collaborators as much as possible, as they often have a wealth of information about the client that may not be immediately available to the prescribing physician.

3.3 | Information providers

APA's third—and most common—category consists of those psychologists who "provide information that may be relevant to pharmacotherapy decision makers" (American Psychological Association, 2011, p. 836). As information providers, psychologists are encouraged by the Practice Guidelines to communicate certain medical information to physicians or prescribers. An information provider "may offer opinions relevant to the pharmacotherapy but does not play a formal role in the decision-making process," unlike a collaborator (American Psychological Association, 2011, p. 836). The APA believes that most psychologists, by default, fall into this category. Information providers give first-hand information to prescribers about patient or client variables, psychological history, presenting problems, and diagnosis. They may identify symptoms, diagnoses, and psychological conditions; may collect psychological background information, gather feedback from parents and teachers, and administer relevant psychological assessments (e.g., Behavior Assessment System for Children, Connors Scale for Assessing Attention-Deficit/Hyperactivity Disorder, Child Behavioral Checklist, and Brown Attention-Deficit Disorder Scales). Psychologists of any training are authorized to recommend a medical evaluation, so long as they do not participate in the recommendation.

Whether as collaborators or information providers, psychologists have received extensive theoretical training in understanding the function of resistance or noncompliance. For this reason, their insights are invaluable, and psychologists should be considered as an equal and collaborative member of the treatment team. Moreover, in not only sharing their observations with physicians about their client's level of compliance but also engaging in joint sessions and/or attending treatment meetings, psychologists serve to model open communication among all team members.

4 | OUR CRITIQUE OF THE PRACTICE GUIDELINES

Although we support the notion of the categorical continuum as proposed by the Practice Guidelines, we argue for a more active approach than the Practice Guidelines suggest when working with juvenile clients. We also discuss two ways in which these three categories should be modified in child and adolescent psychology. When working with juveniles prescribed psychotropic medications, psychologists have a crucial role to play and one that goes beyond simply reporting client information to prescribers or physicians. Considering the potentially severe long-term consequences of psychotropic medication use by juveniles, we believe that psychologists should obtain the necessary training and education to perform at the level of collaborator as much as possible. In contrast, if psychologists (such as those newly licensed) have not gained familiarity with psychopharmacology through training and education, it is still ethical to remain at the role of an information provider. In fact, to serve in the role of a collaborator without obtaining the necessary education and training is to practice outside the scope of competence, which is an ethical violation.

Yet the APA notes that the Practice Guidelines are "not intended to apply to those psychologists who choose not to become directly or indirectly involved in medication management regardless of their level of competency" (p. 835). In our professional opinion, it is ethically problematic for psychologists working—even occasionally-with the juvenile population to be "noninvolved," that is, simply to opt out of involvement in psychopharmacological

issues due to the theoretical orientation, opposition to psychotropic medication, lack of knowledge, anxiety around being perceived by physicians as overstepping boundaries, or even disinterest. This is especially important when working with a vulnerable population, such as juveniles, who do not always have the ability to speak up for themselves. As the APA Practice Guidelines (2011) indicate, the development of competence around medication use occurs on a continuum. Irrespective of one's level of education regarding psychotropic medications, we believe all psychologists should be considered information providers at a minimum, rather than exempt altogether, and that they should strive to obtain the necessary education and perform at the level of collaborators, whenever possible. Opting out altogether is not illegal by any means; rather, it is our position that it may not always be ethical and does not contribute sufficiently to promoting the psychological well-being of the juvenile population.

We believe psychologists who work with children are, at minimum, information providers for the following reasons, regardless of whether they serve as therapists, assessors, or in another capacity: (a) they have an ongoing and proactive relationship with their clients; (b) they obtain feedback from clients and family members about how clients are doing in school, extracurricular activities, and at home; (c) they observe clients for changes in mental status, attention, focus, energy level, weight, mood, and personality; and (d) they invite clients to discuss their experiences with medications, including compliance and noncompliance. As information providers, psychologists bring a plethora of clinically relevant information to physicians and can note any positive and/or negative changes in clients that they have witnessed. Moreover, psychologists are part of the larger medical system; as such, they are not so different from anthropologists, who are participant–observers, and psychoanalysts, who interpret transference and countertransference (Ogden, 1994; Woolcott, 2008).

5 | RECOMMENDED EDUCATION

The Practice Guidelines did not mandate a training structure or a clear demarcation in terms of training between collaborators and information providers (American Psychological Association, 2011). They indicated that it was too early, in 2011, to set requirements. Specifically, the Practice Guidelines state: "The Division 55 Task Force on Practice Guidelines speculated that at some point psychologists may decide it would be judicious to establish standards specific to the domain. However, such a decision at this time would be premature given the nascent state of involvement in pharmacotherapy in psychology" (p. 837). Yet the Practice Guidelines recommend psychologists working with pharmacological issues obtain appropriate training and education. They reference the three levels of training recommended by the APA's 1993 Ad Hoc Task Force on Psychopharmacology (Smyer et al., 1993). We summarize them here: Level 1 is appropriate for an information provider. This would entail basic knowledge in psychopharmacology, which can be obtained from one graduate class in psychopharmacology. Level 2 is appropriate for a collaborator but since there are no programs designed to provide this training specifically, the Practice Guidelines indicate that psychologists who are at this level may take the didactic courses for Level 3 without performing the entire experiential phase. Level 3 is for psychologists with prescriptive authority. It involves "practical training, beginning with psychopharmacology practice in the doctoral program, a psychopharmacology focus in the internship, and extensive on-the-job training coupled with ongoing continuing education (CE)" (Smyer et al., 1993, p. 398). Coursework would include advanced training in pathophysiology, therapeutics, emergency treatment, substance abuse treatment, developmental psychopharmacology, psychopharmacology research, and supervised experience. These recommendations were later revised and incorporated into the APA Recommended Postdoctoral Education and Training Program in Psychopharmacology for Prescriptive Authority (American Psychological Association, 2009). APA benchmark competencies and ASPPB competences also spell out levels and types of learning that are not pharmacologic-specific but would allow psychologists to make informed decisions (Fouad et al., 2009).

Owing to the rapid changes in psychopharmacology, especially regarding juveniles, we recommend that psychologists working as information providers gain psychopharmacological training equivalent to specializing in another area (e.g., forensic assessment). Post-doc fellowships, as endorsed by Shahidullah, Hostutler and Stancin

(2018), are an excellent way to gain training. However, for already practicing psychologists, it may not be possible to immerse oneself in such an endeavor. Thus, we do not recommend requiring additional *formal* education and training of practicing psychologists. Rather, based on our research of CE credit requirements, psychopharmacology education, and our own experience gaining knowledge in this field, we recommend that information providers take at least three hours of CE in psychopharmacology every 2 years.

6 | THE ROLE OF PSYCHOLOGY BOARDS

Before presenting each of the APA Practice Guidelines, we first outline the differences among psychology licensing boards' laws and regulations, and APA General Rules, Standards, and Guidelines, each of which has different criteria of enforceability. Psychology boards regulate psychological practice through binding laws and regulations, although each state board may define elements of practice somewhat differently. The APA Ethics Code (American Psychological Association, 2017/2002) consists of both aspirational principles and enforceable standards. The Preamble and General Principles of the APA Ethics Code "are not themselves enforceable rules, [but] they should be considered by psychologists in arriving at an ethical course of action" (American Psychological Association, 2017/2002, p. 1061). Finally, although APA Practice Guidelines are not enforceable, they are intended to be followed. The APA presents the APA Practice Guidelines discussed in this study as "optimal practice" and as a resource (American Psychological Association, 2011, p. 835). Yet they do not supersede laws, ethical standards, and public agency requirements (American Psychological Association, 2011, p. 837).

The laws and regulations set forth by state boards of psychology, as well as the standards promulgated by the APA Ethics Code, limit psychology practice to staying within one's competence, training, and education. For example, Pennsylvania board regulations state that "psychology…licensees [must] limit their practices to areas of demonstrated competence." (Section 41.51). On the basis of our research, training, and clinical experience, we argue that the best preparation for becoming knowledgeable about psychotropic medication use is to meet the recommendations suggested in the Practice Guidelines, take note of the considerations and critiques in our article here, familiarize oneself with the laws and regulations of the appropriate state licensing board, and frequently review the APA Ethics Code. We contend that if psychologists follow and apply the Practice Guidelines, including our suggestions for how to implement them, as well as a practice within state board regulations, issues of liability will be less likely to occur.

7 | PRACTICE GUIDELINES

Keeping in mind a continuum among the categories of information provider, collaborator, and prescriber, we now discuss each of the Practice Guidelines as they affect mental health treatment in the juvenile population. The Practice Guidelines can be found in Appendix 1. We state what each guideline provides, using paraphrased titles, and then provide our opinion on how the guideline is applicable to the treatment of juveniles. We mainly address those psychologists who may have previously fallen into the "not active" category but now intend to perform as information providers.

7.1 | Guideline 1: Evaluation of one's competence: Seeking consultation

This first Guideline (2011) is perhaps the thorniest and most likely to be a source of concern for psychologists unfamiliar with pharmacology. This Guideline encourages psychologists to evaluate objectively their level of competence and to provide psychopharmacology opinions only if the consultation is within their bounds of knowledge. The trouble with this Guideline is that while it makes sense on an intellectual level, in practice, it is

ethically challenging for psychologists to know how to assess their knowledge and competence with respect to psychopharmacology, especially if a barometer is not provided. Thus, reliance on peer-reviewed journal articles or "reputable summaries of that literature" (American Psychological Association, 2011, p. 839) is one such way for psychologists to gain knowledge and ensure that they are not acting outside the boundaries of their competence (American Psychological Association, 2017/2001).

7.1.1 | Required knowledge to be competent

Without the additional education requirements, we propose that "seeking consultation" fall into the realm of information provider. Although it may be sufficient to serve as a collaborator in certain situations, more formal education, as discussed earlier, is needed for psychologists to move on the continuum toward becoming a full collaborator. With so much at stake in the juvenile practice, we urge psychologists to err on the side of more training when working with the juveniles.

Adequate expertise in pharmacology involves learning the names and uses of medications, their interactions with other medications, knowing which are Food and Drug Administration-approved and for which symptoms, which are used off-label and why, and reading the complex and often conflicting literature about each medication's effectiveness, short-term side effects, and possible long-term repercussions (Olfson, Crystal, Huang, & Gerhard, 2010). Given the wealth of important information regarding the medication use, we believe that psychologists need to remain current with the literature in this rapidly changing field. We suggest several ways of acquiring beginning to intermediate levels of knowledge:

(A) *Take Continuing Education (CE) courses*. Take CE courses on psychopharmacology. A CE course from a reputable organization, like APA, will highlight the broad picture of the research on medication effectiveness as well as short- and long-term effects of such use.

(B) *Take full-day courses and/or workshops*. As discussed earlier, our recommendation is that psychologists who work with children should take 3 hours of psychopharmacology CEs at least every 2 years.

(C) *Peruse related textbooks*. Examples of an entry-level accessible texts on psychopharmacology include the following: Ingersoll and Rak's (2015) *Psychopharmacology for Mental Health Professionals*; Brown, Carpenter, and Simerly (2005) *Mental Health Medications for Children*; and Preston and Johnson's (2000) *Clinical psychopharmacology made ridiculously simple*.

(D) *Read articles*. Journals, such as *The Journal of Child and Adolescent Psychopharmacology* and *The Journal of Clinical Psychopharmacology*, are useful. One can conduct a comprehensive literature review of peer-reviewed research using Google Scholar or library databases at a public library or university institution. In addition, a recent publication by Wegmann (2015) titled, *Psychopharmacology: Straight Talk on Mental Health Medications*, provides an accessible yet informative overview about psychotropic medication use in children.

(E) *Become familiar with relevant government websites*. The National Institute of Mental Health (NIMH) publishes and updates a website on common psychotropic medications and associated physiological changes (National Institute of Mental Heath, 2018).

(F) *Use meta-analyses*. Reviewing a meta-analysis that evaluates the research findings on different psychotropic medications is useful for gaining an overview of the various classes of medications. Teixeira, Jacintho, Celeri and Dalgalarrondo (2013), who review research on each atypical antipsychotic medication, provide one such resource. In addition, in their respective works, Whitaker (2010), Gottstein, Olfman and Robbins (2012), and Olfman and Robbins (2012) discuss the negative effects of antipsychotics and other psychotropics on children and adults. Books and articles for primary care physicians usually have useful information, although they may use medical jargon that is unfamiliar to psychologists (e.g., Sobel, 2013).

(G) *Attend conferences*. Another way to not only increase knowledge about psychotropic medications but also network with psychiatrists is to attend conferences geared toward educating psychologists about the benefits

and drawbacks of psychotropic medications. APA Divisions 12 (Society of Clinical Psychology), 16 (School Psychology), 28 (Psychopharmacology and Substance Abuse), 53 (Society of Clinical Child and Adolescent Psychology), and 55 (American Society for Advancement of Psychopharmacology) frequently list such conferences. These divisions may also provide funding and education for psychologists interested in learning more about psychopharmacology.

(H) *Consult with colleagues*. As suggested by the APA Ethics Code (American Psychological Association, 2017/2002), it is important to consult with other, more informed psychologists, psychiatrists, or psychiatry residents who are familiar with psychopharmacology and willing to serve as mentors.

(I) *Become a collaborator or prescriber*. Becoming a prescriber (in states that provide for this) would entail holding an active license, completing a postdoctoral masters or certificate program, and passing the Psychopharmacology Examination for Psychologists (Cooper, 2017); or obtain a master's degree in psychopharmacology. Universities, such as Farleigh Dickson and Alliant International are two institutions that offer such master's degrees. Another option is to pursue most of the education toward becoming a prescriber, which would likely provide enough of the education necessary to serve as a collaborator.

7.1.2 | Challenges in learning the material

Reading and critiquing research are skills that most psychologists learn in doctoral programs; such skills should be applied to that of the juvenile pharmacological material even though pharmacology is often not covered in doctoral programs.

7.2 | Guideline 2: Evaluating "feelings and attitudes" about psychopharmacology

Psychologists' attitudes about pharmacology run on a continuum from a full endorsement of medication efficacy and safety to strong critique or even disavowal (Cohen-Mansfield, Jensen, Resnick, & Norris, 2012; DeLeon & Wiggins, 1996; Robiner et al., 2003; Tatman, Peters, Greene, & Bongar, 1997). The Practice Guidelines indicate that psychologists who are "aware of their attitudes and feelings toward medications, and who openly accept the possible validity of alternative viewpoints, are in the best position to discuss the potential risks and benefits of using medication in a balanced manner" (American Psychological Association, 2011, p. 839). We agree with this sensible viewpoint, which is particularly important when working with the juvenile population who usually cannot provide or deny consent and are often not able to advocate for themselves (Kuther, 2003). Moreover, developmentally growing children react differently to medications than adults and these medications may have an adverse effect on their physiological and physical wellbeing (Magellan Health Services,). Whereas an adult on Prozac may feel comfortable speaking up about side effects to their physician, a child (as well as the child's guardian) may feel unequipped, especially if changes are happening within the child's body; indeed, the guardian may turn instead to the child's psychologist for guidance because the psychologist is likely to have more frequent contact and a good alliance with the child. Knowing that families put their trust in psychologists to answer such questions suggests that it is ethically imperative for psychologists to spend time evaluating their own internal biases and judgments about medication use, as well as to educate themselves about any medications their clients may be taking.

7.3 | Guideline 3: Sensitivity to contextual factors within different populations

This Guideline urges psychologists to be aware of the "developmental, age and ageing, educational, sex and gender, language, health status, and cultural/ethnicity factors that can moderate the interpersonal and biological aspects of psychopharmacotherapy" with regard to different populations served (American Psychological Association, 2011, p. 839). The ethnic and cultural identities of our juvenile population highlight differences in medication use; psychologists and prescribers must be attuned to how an idiosyncratic diagnostic presentation may, in fact, be a

reflection of culture. For example, it is not uncommon for White physicians to interact with families from a non-White background who may have a different view of psychotropic medication that diverges from the physicians' view. In addition, beliefs about treatment and the biological and psychosocial response to treatment are also influenced by the ethnic and cultural backgrounds (American Psychological Association, 2011).

Although psychologists are usually well trained in culture and diversity, such training does not typically include different cultures' responses to psychotropic medications (American Psychological Association 2003; Roysircar, 2004). Moreover, cultural diversity research often fails to address medication issues. In addition, recommendations for further training in cultural diversity competence, usually, do not include discussions about medication use (Goh, 2005). For these reasons, this area is one that will require extra sensitivity and research to gain competence, especially with respect to treating the juvenile clients. Some useful articles include the Leslie et al. (2003) article outlining different cultural views on psychotropic medication use.

7.4 | Guideline 4: Continuing education in psychopharmacology

This Guideline focuses on the importance of engaging in continuing education activities regarding psychotropic medications, especially given that most doctoral programs in psychology offer very limited training with respect to psychopharmacology (Robiner et al., 2003). This Guideline, which addresses the need to stay abreast of the latest psychotropic research, applies to those who meet the initial educational requirements of information provider or collaborator. Engaging in continuing education is particularly important with a child and adolescent practice because of the rapidly changing nature of child psychopharmacology, particularly, the effects of on- and off-label medications (Hamrin & Pachler, 2007). This Guideline also is consistent with the APA's list of competencies recommended for child psychologists, one of which concerns medical knowledge (Spirito et al., 2003). The suggestions set out in Guideline 1 provide that education.

7.5 | Guideline 5: Sensitivity to adverse side effects of medication

This Guideline addresses the adverse effects of medication and the importance of sensitivity on part of both the psychologists and prescribers. This is especially important given that in some studies the most common reason cited for clients' premature termination of medications was due to the negative side effects (Ashton, Jamerson, Weinstein, & Wagoner, 2005; Kampman & Lehtinen, 1999). The Guideline suggests that because psychologists may interact with patients more frequently than physicians, they play a "useful role in the early detection of possible side effects" and are encouraged to inform medication prescribers when they note such effects (American Psychological Association, 2011, p. 841). We agree with this Guideline and believe this model applies exceptionally well to working with juvenile patients because they may not feel comfortable sharing information about side effects with physicians who they see only occasionally. Juveniles may be more likely to share such information with psychologists with whom they have a good rapport and a trusting relationship.

7.6 | Guideline 6: Familiarity with "technological resources" that help decision-making

In this Guideline, APA suggests that psychologists and prescribers utilize online and other technological resources to stay abreast of developments in psychopharmacology. They encourage psychologists to familiarize themselves with "available technological and expert resources" with respect "to computers and/or personal digital assistants that offer extensive and frequently updated information about pharmaceutical agents" (American Psychological Association, 2011, p. 841). A search domain used in the medical field is PICO, which stands for "Patient, Intervention, Comparison, and Outcome" (Santos, Pimenta, & Nobre, 2007). Using PICO to formulate the search question can result in effective and high-quality articles. This guidance is particularly useful for those working with juvenile clients because of the rapidly changing nature of psychotropic medication.

In addition, given that most adolescents are technologically literate, we encourage psychologists and prescribers to help patients track their own data via smartphone apps, such as "Symple" and "MediSafe."

7.7 | Guideline 7: Procedures for evaluating medication effects

This Guideline encourages prescribers to become reasonably familiar with the procedures for evaluating the effects of psychotropic medications on diverse clinical populations by way of physical exams, lab results, and normative data ranges. It also encourages prescribers to recognize how variation in results can occur across ethnicity and gender. The Guideline points out that there are no current standards of practice in place regarding physical exams as a routine part of prescribing or evaluating medications and suggests that this be remedied. The authors note that conducting physical exams is particularly important in the case of pediatric patients who may benefit from such exams due to rapid developmental and physiological changes (American Psychological Association, 2011). Although this particular Guideline is geared toward prescribers, we believe that psychologists, especially those wishing to perform at the level of collaborator, also familiarize themselves with expected side effects, developmental changes, and predicted rates of efficacy to become more familiar with changes their clients may undergo while on medication.

As noted above, the National Institue of Mental Health (2018) government website is particularly useful for providing a general overview of developmental and physiological changes. Being observant of physical and personality changes is especially important when working with the juvenile population, as such changes can be hindered or negatively impacted by inappropriate prescribing practices (Marrus, Bell, & Luby, 2014; Singh & Chang, 2012). Development processes in children and adolescents can be negatively affected by medication (Nicol et al., 2016; Stafford et al., 2015), and it is more likely that personality changes will be observed by treating psychologists than prescribing physicians.

7.8 | Guideline 8: Monitoring physiological reactions with comorbid physical and psychological disorders

This Guideline highlights the importance of prescribers conducting thorough medical evaluations on patients who may be taking multiple prescriptions for physical and mental health illnesses. Regarding juvenile patients, we believe that psychologists can participate in this evaluation as collaborators or information providers by offering their own in-depth psychological assessment, which includes obtaining the history of the client's past psychotropic medications and family history of mental illness. As noted in the previous Guideline, psychologists can learn to observe and recognize physiological reactions (as well as withdrawal effects) in patients who may be on multiple medications by familiarizing themselves with the medications and associated side effects, using, for example, the National Institute of Mental Health website (National Institue of Mental Health, 2018). Interviewing families regarding notable physical changes in children, especially when starting a new psychotropic medication or adding a second medication, can provide a wealth of information appropriate for psychologists to share with the physicians.

7.9 | Guideline 9: Investigating patients' attitudes toward medication

This Guideline begins with an overview of the literature regarding adherence rates in pharmacotherapy, noting high rates of premature discontinuation or termination of medications by patients (Olfson et al., 2006). The authors provide a multitude of reasons why patients may not adhere to medication treatment, including lack of access to providers, barriers to attending appointments, ambivalence about medications, and misinformation (American Psychological Association, 2011). They suggest that, due to the close relationship with patients, "psychologists are sensitive to the potential for diversion of medication and misrepresentation of its use," especially in the case of stimulants (p. 843).

We believe that psychologists can play an important role in assessing children or adolescents' beliefs about taking medications, as well as helping families work through conflicting views about medication. Indeed, the nature of clinical practice suggests that psychologists are particularly well qualified to assess their patients' attitudes toward taking medication. Therapists regularly seek to understand the worldview of people receiving psychological services and, in this case, psychologists would investigate client concerns about any prescribed medications, including attitudes that may impact taking medications as prescribed (traditionally referred to as "compliance"). Whereas physicians may come face to face more often with noncompliant patients, especially if they do not have a strong therapeutic relationship, psychologists are in a unique position to investigate, in a nonjudgmental way, why juvenile clients may not be taking medications as prescribed.

7.10 | Guideline 10: Building relationships with clients to assess medication adherence

Building on the previous Guideline, this Guideline highlights the importance of psychologists raising medication issues in the therapy relationship, as a "sizeable proportion of patients who terminate medication treatment prematurely do so without informing the prescribing professional" (American Psychological Association, 2011, p. 843). This may be especially true of the juvenile population, as from a developmental perspective they may not have the language to articulate medication concerns to the prescribers. Research indicates that adolescents are less likely to stay on medications than children due to developmental and emotional changes, as well as a wish to feel "normal" with regard to the social comparison (Taddeo, Egedy, & Frappier, 2008). The Guideline notes that psychologists can pose "specific questions to evaluate the level of adherence in as nonstressful manner as possible, promoting adherence when it is suboptimal, and normalizing the patient's concerns about medication" (American Psychological Association, 2011, p. 843). Finally, the Practice Guidelines encourage psychologists to have workable, trusting relationships with clients such that clients may confide in them about noncompliance or premature termination of medication use. We take this one step further with juvenile clients to include the client's family—as it is often the family who may report issues of noncompliance. This is particularly important for juveniles who usually have no formal power to consent or reject treatment (Kuther, 2003).

7.11 | Guideline 11: Reliance on the biopsychosocial model

This Guideline highlights the importance of utilizing the biopsychosocial framework in the conceptualization and treatment decisions of all psychiatric patients. The Practice Guidelines note the importance of considering psychological, social, or educational approaches alongside biological interventions and even see these former interventions as "superior to biological interventions […] in certain circumstances" (American Psychological Association, 2011, p. 843). We believe that psychologists are well-skilled to educate physicians about the nonbiological components of mental illness, given that such training is inherent in psychology graduate programs and psychological practice (Spirito et al., 2003). In addition, psychologists can remind physicians that "over-reliance on medication alone is insufficient" and that, generally speaking, "psychopharmacology is most efficacious when used in the service of psychotherapy" (Diamond, 2008). Research on outcome studies repeatedly finds that the pairing of psychotherapy and medication is the most effective treatment modality (Choi & Kim, 2018; Craighead & Dunlop, 2014; Cuijpers, Andersson, Donker, & van Straten, 2011; Guidi, Tomba, & Fava, 2015; Hollon & Ponniah, 2010). This is especially true for pediatric clients (Almirall & Chronis-Tuscano, 2016; Masi, Liboni, & Brovedani, 2010).

Although the Practice Guidelines do not directly address working with pediatric patients, we believe this Guideline greatly applies to psychologists who treat children and adolescents. When psychologists can explain, in an accessible manner, the biopsychosocial model of mental illness to physicians, families, and clients and spend time answering questions and addressing concerns, treatment adherence is likely to be higher.

7.12 | Guideline 12: Utilizing an expanded informed consent process

Guideline 12 is based on the APA Ethics Code requirement that psychologists "obtain informed consent before any professional interaction whenever possible" (American Psychological Association, 2011, p. 844). This section, specifically geared toward prescribers, encourages not only verbal consent but also written consent and provides a list of topics that prescribers may choose to discuss with patients when pharmacotherapy is being considered as a treatment option. While the recommendation is well intended, we believe that the Practice Guidelines did not consider that most juveniles cannot formally consent or reject treatment. Parents have the right to provide consent and children have a more limited power of assent (De Clercq, Ruhe, Rost, & Elger, 2017; Kuther, 2003). Therefore, psychologists should be even more cautious when working with juveniles (American College of Pediatricians, 2015). We believe that such consent or assent might also be appropriate, on a case-by-case basis, for nonprescribing psychologists interacting with juveniles prescribed psychotropic medications. Assent might also include asking children and families for permission to inquire about medications and reasons for noncompliance. Doing so would likely lead to greater cooperation and disclosure of noncompliance, as well as increase the therapeutic alliance. Consistent with the APA Ethics Code (American Psychological Association, 2017/2002), we suggest that this expanded informed consent and assent process occur during the initial intake meetings with the juvenile clients and families.

7.13 | Guideline 13: When contemplating treatment, consider all parties

This Guideline highlights the importance of prescribers considering the patient's best interests when reviewing different treatment options. It notes that in the absence of clear recommendations, prescribers should use their own judgment about the best course of action, whether that is therapy, medications, or both (American Psychological Association, 2011). This Guideline also highlights the tension among client interest, research findings, and the needs of the larger psychological and medical communities. The Practice Guidelines note that just because a "referral [...] for pharmaceutical treatment" has been suggested does not mean that a prescriber must adhere to this course of action (American Psychological Association, 2011, p. 845). With respect to juvenile clients, psychologists are in a unique place to remind physicians of competing alternative treatments and to discuss such treatments with the juvenile clients and family members.

7.14 | Guideline 14: The power of marketing and its influence on biasing clinical decisions

APA limits this Guideline to prescribers but we believe it should apply to all psychologists working with juveniles. This Guideline states that prescribers should be aware of the potential motivations behind the promotion or use of certain psychopharmaceutical drugs (American Psychological Association, 2011). Pharmaceutical companies fund much of the efficacy research (Vitiello, 2008) and provide physicians, agencies, and hospitals with free education, travel expenses, samples, and other items (Tobin, 2018). The companies' return has been found to be seven times the expense (Tobin, 2018) as there is often a direct correlation between pharmaceutical companies' gifts and physicians prescribing of more medications per patient, more costly prescriptions, and the choice of the pharmaceutically endorsed prescriptions over other drug options (Wood et al., 2017). A pharmaceutical-driven approach to care over a patient-directed approach is another problematic effect of this influence (Brody, 2017). Doctors generally approach the problem as causing "potential" conflicts of interest but in a recent medical journal editorial, Tobin (2018) acknowledged that these practices create unassailable conflicts of interest. Some states have put in place limitations on such gifts. In those states, prescribing of name brand medications is reduced (King & Bearman, 2017; Truog & Curtis, 2018).

This practice is even more problematic in the category of juvenile medication because so many juvenile prescriptions are off-label (Anderson et al., 2015). Recent research suggests off-label prescribing to juveniles is reduced when conflicts of interest rules are in place, but there is still work to be done (Larkin, Ang, Avorn, & Kesselheim, 2014).

Psychologists need to be aware of the major role pharmaceutical companies play in a physicians' choice of prescriptions and the inherent bias it produces, especially in prescribers treating children. Also, psychologists should be cognizant of the potential invalidity of pharmaceutically funded research. Becoming familiar with the range of research findings in pharmacology should ensure that psychologists are not themselves unfairly influenced by biased research.

7.15 | Guideline 15: Using patient interactions to understand interpersonal behavior

This Guideline, primarily geared toward prescribers, notes the importance of paying attention to the "patient's characteristic patterns of interpreting interpersonal situations [and how] this plays a role in the desire for medication, [the patient's] reaction to the recommendation of medication, and compliance with the treatment regime" (American Psychological Association, 2011, p. 846). In other words, how clients engage with medications is likely to reflect how they live in the world. Learning about the client's worldview is at the heart of psychological practice (McWilliams, 2011), and we believe that psychologists, acting as information providers or collaborators, can impact physician decisions by providing insightful input about their patients' characterological and personality styles. This is particularly important with juvenile clients if they are unwilling to share with physicians the details of medications' effects or side effects (Delman, Clark, Eisen, & Parker, 2015; Lipstein, Dodds, & Britto, 2014)

7.16 | Guideline 16: Collaborating with other mental health providers

This Guideline underscores the main argument in this article—that nonprescribing psychologists should interact with their clients' prescribers and physicians to provide optimal teamwork and patient care. Psychiatric practice parameters and general guidance also recommend interacting well with other mental health professionals (Walkup, 2009; Belitz & Bailey, 2009). Many large hospital settings with excellent funding already utilize those recommended best practices: that is, a comprehensive, multidisciplinary, and interprofessional approach to services (American Academy of Child & Adolescent Psychiatry, 2008; American Psychological Association 2013; Olfman & Robbins, 2012). Psychologists in these well-funded settings collaborate with interdisciplinary teams to treat children with mental health and physical disabilities. Such collaborative care not only allows therapists to serve in the role of collaborators (rather than information providers) but also strengthens team relationships and promotes effective, holistic care (Miller-Matero et al., 2016). This role requires continual vigilance to ethical concerns, such as multiple relationships and the nature of consent or assent (Williamson et al., 2017).

With respect to specific populations, however, juveniles within the foster care system or in low-income families may not have access to an interdisciplinary team approach to the same extent as more financially stable families or well-endowed hospitals (Simms, Dubowitz, & Szilagyi, 2000). Without the support of an interdisciplinary team, juvenile patients may not receive adequate care. In fact, research notes that psychotropic medications are sometimes prescribed when other social systems and supports are limited, including therapy (Martin & Leslie, 2003; Saloner et al., 2014; Simms et al., 2000). Considering this information, we encourage nonprescribing psychologists working with low-income or juvenile patients who may be receiving outside psychotropic care to act as collaborators or information providers and reach out to physicians, as doing so will likely strengthen the patients' overall treatment plan.

Psychologists might consider educating physicians in areas that may impact juvenile medication use—especially in areas that physicians, given their specific medical training, may not be as well-versed. For example, psychologists are frequently trained in multicultural issues and understand that juvenile populations of varying cultural

backgrounds may have different understandings of medication use (Leslie et al., 2003). Psychologists are in a unique position, given their in-depth work with clients and families, to provide education to physicians about these cultural and ethnic views. A hypothetical scenario in which this occurs may result in the physician modifying prescriptions or deciding not to prescribe altogether; this is also an example of psychologists serving as information providers. Also, as noted in the discussion of Guideline 11, research has consistently found that outcomes are improved when psychotherapy is paired with medication. Psychologists would help their juvenile clients by sharing that information with physicians endorsing medication as a sole treatment.

7.17 | Guideline 17: Maintaining appropriate relationships with prescribers

The final Guideline refers to the Ethical Standard 3.09 of the APA Ethics Code (American Psychological Association, 2017/2002) and illustrates the importance of professional cooperation among teams in the service of patient care. This Guideline, crucial in implementing all the aforementioned Practice Guidelines, is central to propelling psychologists from being noninvolved in pharmacology to becoming information providers. Psychologists are "encouraged to maintain ongoing consultation with the patient's primary health care provider; [likewise] the primary care provider may […] be reminded to alert the psychologist to any changes in the patient's health status" (American Psychological Association, 2011, p. 847). We believe this is particularly important in treating the juvenile population. Moreover, involving supportive families or guardians of minors in such care further increases the probability of effective treatment. By incorporating these Practice Guidelines into their practice with skill and knowledge, we hope that psychologists will gain additional confidence in their interactions with physicians.

8 | UTILIZING THE PRACTICE GUIDELINES: IMPROVING COMMUNICATION BETWEEN PSYCHOLOGISTS AND PHYSICIANS

In this final section of the article, we draw upon the implementation of the aforementioned Guidelines with regard to helping psychologists promote effective communication with physicians and prescribers. We provide suggestions for how to address medication concerns with prescribers effectively, with the aim of increasing psychologists' roles from the nonparticipators to that of information prescribers or collaborators. As noted, psychologists who have concerns around the use of psychopharmacology or the efficacy of a particular prescription may not know how best to advocate for clients (Bouloudnine, Lee, & Rowe, 2015), especially when consulting with physicians. This challenge in communication is largely the function of how psychology and psychiatry are often separated into different domains, a gap that APA has attempted to narrow with the publication of the Practice Guidelines article (2011).

8.1 | Interacting with physicians about diagnoses and medications

As noted earlier, psychologists familiar with medications and their side effects should work with physicians rather than defer pharmacological evaluations to physicians. Psychologists' dialogues with physicians need not be adversarial; ideally, such conversations would be collegial and reflect the shared goal of helping the clients. We have observed that psychologists housed within well-functioning interdisciplinary teams are more likely to have positive relationships with physicians and feel comfortable raising questions and engaging in collaborative care.

In other cases, however, psychologists' interactions with physicians may present a challenge, especially if physicians are not interested in receiving outside input, particularly from nonphysicians. This may occur for a number of reasons, including physicians' beliefs that their expertise is being questioned; physicians' personal dislike of discussing psychopharmacology with psychologists; physicians' preference to work independently; and even physicians' reliance on biased research that shows the benefits of psychotropic medication use alone (Cohen-Mansfield et al. 2012; Miller-Matero et al., 2016; Talbot, Clark, Yuzda, Charron, & McDonald, 2014).

Occasionally, physicians may take the position that psychologists do not have the right to address medication issues, as noted in a case brought to the State of Florida. In a psychological report, licensed psychologist Harry Reiff recommended that a staff psychiatrist consider placing a patient on antianxiety medication. The psychiatrist responded by asserting that a medication recommendation was "improper and outside the scope of Dr. Reiff's practice as a psychologist" ("In Re Rieff," 1998). Dr. Reiff brought his complaint to the State of Florida's Board of Psychology and asked for permission to make medication recommendations, as appropriate. He argued that, in addition to his extensive academic training and coursework in psychopharmacology, he had a "professional duty to provide all relevant recommendations" ("In Re Rieff," 1998, p. 2). The Florida Board of Psychology ruled in favor of Dr. Reiff, stating that he had the authority to recommend psychotropic medication, so long as he did not engage in "the prescribing, ordering, or dispensing of the medication" ("In Re Rieff," 1998, p. 4). Although the *Reiff* ruling is directly applicable only to Dr. Reiff, the decision could easily apply to all psychologists in Florida who have similar training and experience. We believe this reasoning could also support psychologists in other jurisdictions. In sum, the more familiar psychologists become with discussions around psychotropic medications, the more likely they will develop collaborative and respectful relationships with medication prescribers and, in turn, can better advocate for their juvenile patients.

9 | CONCLUSION

In this article, we have outlined the APA Practice Guidelines as applicable to psychology practice with juveniles and have drawn attention to the arguments surrounding overuse of juvenile psychotropic medications. Using the Practice Guidelines proposed by the American Psychological Association (2011), we provided suggestions for psychologists and prescribers for using these Practice Guidelines in their work with juvenile patients and medical providers. Our suggestions mainly address clinical work and counseling, yet they also involve action, advocacy, and ethical responsibility. We are hopeful that APA and other mental health organizations will continue to take a leadership role in advocating for children, adolescents, and their families. The suggestions in this article will provide psychologists with the support and fortitude needed to work alongside physicians and, when necessary, take ethical action to ultimately protect the wellbeing of the juvenile population.

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ORCID

Susan G. Goldberg http://orcid.org/0000-0002-3310-9833

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of the article.

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