

# Prescriptive Authority for Psychologists: A Looming Health Hazard?

William N. Robiner, Diane L. Bearman, Margit Berman, University of Minnesota Medical School  
William M. Grove, University of Minnesota  
Eduardo Colón, Hennepin County Medical Center<sup>1</sup>  
Joann Armstrong, Susan Mareck, University of Minnesota Medical School

**Although many psychologists are interested in pursuing prescription privileges, the historical training paradigm in psychology comprises limited scientific education that is directly relevant to prescribing medications. Issues related to prescriptive authority for psychologists, including training gaps, attitudes, and accreditation and regulation are discussed. Current proposals to train psychologists to prescribe psychoactive medications have deleted the prerequisite coursework in the biological and physical science for such training that had been identified by the American Psychological Association's Ad Hoc Task Force on Psychopharmacology. Current proposals also fail to delineate clear requirements for several key aspects of supervised practical training. Data presented in a related article<sup>1</sup> as well as the training limitations raise serious questions about how much additional scientific and medical training would be necessary to ensure that psychologists could provide an acceptable quality of pharmacologic care.**

Advances in neuroscience, the development of safer, efficacious drugs, such as the SSRIs, along with changing realities in health care economics are transforming the delivery of mental health services. As these unfold, and as the use of psychotropics increases<sup>2</sup>, psychologists' interest in obtaining prescriptive authority for psychotropic medication has increased<sup>3-13</sup>. In this paper, we address a range of issues related to prescriptive authority for psychologists, including training, accreditation, and regulation.

The American Psychological Association established an ad hoc Task Force on Psychopharmacology<sup>14</sup> to explore the desirability and feasibility of psychopharmacology prescription privileges for psychologists. The Task Force concluded that greater understanding of psychopharmacology

would enhance the care that psychologists provide<sup>15</sup>. The APA Task Force proposed three levels of preparation in psychopharmacology: Level 1- Basic Psychopharmacology Education; Level 2- Collaborative Practice; and Level 3- Prescription Privileges. Whereas the Task Force considered that all psychologists providing mental health services should be prepared at Level 1, it did not take that position for training at Level 3<sup>16</sup>. Instead, it considered that "retraining of practicing psychologists for prescription privileges would need to carefully consider selection criteria, focusing on those psychologists *with the necessary science background*"<sup>14</sup> (italics added for emphasis; p. 66). This included undergraduate coursework in biology, chemistry, and other areas typifying the pre-medical curriculum.

Ultimately, the American Psychological Association<sup>17</sup> devoted greatest attention to the most controversial option, Level 3, promoting a hybrid of continuing education and a modular executive training<sup>11</sup> type of postdoctoral-level training in psychopharmacology. Several programs have been developed, including some that emphasize distance-learning. Thus far, specific selection criteria for the scientific background to which the Task Force alluded have not been delineated. Some psychologists seem to question the necessity of this background<sup>18</sup>.

In 1995 the APA Council of Representatives<sup>7</sup> passed a resolution making the pursuit of prescription privilege an official objective for the organization. It has become a priority for a number of psychologists as reflected in the growing number of initiatives of state psychological associations<sup>7</sup>. APA has focused on the pursuit of independent prescriptive authority<sup>19</sup>. Meanwhile, little discussion has ensued in the psychology literature about the Task Force's Level-2 collaborative practice, which was envisioned to enhance patient care via collaborations with prescribers

<sup>1</sup>Address Correspondence to: William N. Robiner, Ph.D., University of Minnesota Medical School Mayo Mail Code 741, 420 Delaware Street, Southeast Minneapolis, Minnesota 55455-0392 Telephone: (612) 624-1479 e-mail: [robin005@umn.edu](mailto:robin005@umn.edu).

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by expanding their expertise about medication management. More psychology graduate students believe that Level 2 (77%) training should be offered in their programs than Level 3 (57%)<sup>20</sup>.

#### DEPARTMENT OF DEFENSE PSYCHOPHARMACOLOGY DEMONSTRATION PROJECT

The controversy surrounding psychologists' prescription privileges was heightened by the Department of Defense (DoD) Psychopharmacology Demonstration Project (PDP) which trained ten psychologists to prescribe in military health care settings<sup>21</sup>. The initial PDP participants undertook some preparation in chemistry and biochemistry before completing a majority of 1st year medical school courses. During their first full-time year at the Uniformed Services University of the Health Sciences, they worked with the Psychiatry-Liaison service and assumed night call with 2nd year psychiatry residents. In the second full-time year, they completed core basic science courses and continued psychopharmacology training and clinical work. After 2-day written and oral examinations, they had a third year of supervised clinical work at Walter Reed Army Medical Center or Malcolm Grow Medical Center. The PDP curriculum underwent subsequent iterations, streamlining training to one year of coursework and a year of supervised clinical practice<sup>22,23</sup>. For example, the didactic hours decreased by 48% in the second iteration. Most PDP graduates have functioned as prescribing psychologists in branches of the military. One graduate went on to medical school.

The PDP was discontinued after the first few years. Advocates of psychologist prescription privileges argue that the successes of the PDP justify extending prescriptive authority to other psychologists who undergo training consistent with the APA model<sup>17</sup>, even though that training model and the likely resources available for the training differ from the PDP. It is not known how well the successes of the 10 PDP psychologists, who were trained within a military medical school and military hospital settings, and whose care was confined to a patient population largely screened for health and other factors, would generalize to the potentially thousands of psychologists who might wish to obtain psychopharmacology training and then to practice independently across the spectrum of clinical or counseling settings and with diverse populations<sup>24,25</sup>.

Some skepticism is warranted especially in light of concerns about certain limitations of the PDP fellows' clinical proficiencies, such as in treating medically complex patients<sup>25</sup>. The Final Report of the American College of Neuropsychopharmacology<sup>26</sup> on the PDP assessed graduates as weaker medically and psychiatrically than psychiatrists. The report indicated that graduates only saw patients aged 18-65, some had limited formularies, and some continued to have dependent prescriptive practice (i.e., supervised by a physician). Moreover, the PDP graduates advised against "short-cut" programs and considered that a year

of intensive *full-time* clinical experience, including inpatient care, was essential. Some of the programs' psychiatrists, physicians, and graduates expressed doubts about the safety and effectiveness of psychologists prescribing independently outside of the interdisciplinary team of the military context. This latter concern has been echoed in a survey of military psychiatrists, non-psychiatric physicians, and social workers<sup>27</sup>. Given the likelihood that other programs would lack some of the advantages of the PDP, such assessments raise questions about how well the conditions of the PDP would be duplicated. Despite the positive experiences of PDP graduates, these concerns justify wariness about prescribing psychologists relative to other prescribers, especially for populations not included or emphasized in the PDP.

#### ATTITUDES ABOUT PSYCHOLOGISTS' PRESCRIPTIVE AUTHORITY

The prescriptive privilege movement within psychology emanated from practitioners rather than academicians, who initially refrained from addressing it<sup>3,9</sup>. Training directors of existing psychology programs remain equivocal about it<sup>28</sup>, and relatively few academic psychologists appear interested in developing training programs<sup>18</sup>. Academic psychologists' ambivalence about pharmacology training programs is of concern because it raises questions about the feasibility of developing psychopharmacology training programs of consistent high quality in settings with limited experience in educating and training psychologists.

Surveys of psychologists and trainees have yielded inconsistent estimates of psychologists' support of the prescriptive authority agenda<sup>29</sup>. An early survey revealed that 58% opposed prescription privileges<sup>30</sup>. Some recent surveys reveal that more psychologists (about 70%) favor prescriptive authority<sup>13,20,31</sup>. The largest survey of APA members found that 30% strongly supported it and another 38% favored it<sup>32</sup>. The other third were unsure or opposed. More recent surveys continue to suggest inconsistent attitudes among psychologists<sup>27,33,34</sup>. One survey suggests there is less support among older psychologists and women<sup>35</sup>.

Whatever sentiments surveys of psychologists might reveal, it clearly is less appropriate to decide this issue on the basis of its popularity among psychologists than on the quality of pharmacologic care that psychologists would provide<sup>36</sup>. Consideration needs to be given to the concerns of a range of potential stakeholders, including consumers, educators and practitioners in other health disciplines experienced in prescribing, and regulatory and governmental authorities, such as the Food and Drug Administration.

Interestingly, even among some supporters of psychologists' prescription privileges, a degree of ambivalence about the prescriptive authority agenda may be inferred<sup>35,37</sup>. For example, although a majority of psychology internship directors and interns are supportive in principle, most are not inclined to pursue it themselves<sup>13</sup>. Although the reasons for this split between the abstract support of a prescription privilege

and the intention not to train for it is not fully understood, it deserves further analysis<sup>33</sup>.

Surveys of psychologists who work within medical settings or medical schools yield relatively less support for the prescriptive authority agenda than broader surveys of psychologists<sup>38-42</sup>. This probably reflects their more frequent contacts with medically complex patients for whom prescribing is more complicated and risky. It may also reflect their ready access to collaboration with physicians, wish to preserve inter-professional relationships, as well as a fuller appreciation of their own limited understanding of medicine as a whole.

Some psychologists are strongly opposed to prescription privileges<sup>43</sup> informed by a broad range of concerns<sup>24,36,44-53</sup>. A comprehensive review of these concerns, including iatrogenic mortality<sup>54</sup>, is beyond the scope of this article. Organizations such as the American Association of Applied and Preventive Psychology (AAAPP) and Section 3 of APA Division 12 (i.e., the Society for the Science of Clinical Psychology) oppose prescriptive authority<sup>55</sup>.

Compelling arguments opposing psychologists' prescriptive authority have been articulated by psychiatrists<sup>55,56,57</sup>. The debate about prescription privileges has been construed more broadly than the ability to write prescriptions, i.e., should psychologists practice medicine<sup>58</sup>? Psychiatric organizations, such as the American Psychiatric Association<sup>59-61</sup> oppose prescriptive authority for psychologists, contending that prescribing should be reserved for medical school graduates. Psychiatrists are not alone in this belief. In fact, many psychologists share psychiatrists' concern: 43% of psychologists responding to an APA survey indicted that "full medical training would be required" for prescription privileges<sup>14</sup> (p. 95). The American Medical Association and a range of other professionals and consumer groups also have expressed opposition to allowing psychologists' prescriptive authority<sup>62-64</sup>.

#### QUALITY OF CARE: THE CENTRAL CONCERN ABOUT PSYCHOLOGIST PRESCRIBING

Our primary concern is the risk of suboptimal care if psychologists undertake that could arise from their limited breadth and depth of knowledge about human physiology, medicine, and related areas. This risk would be compounded by psychologists' limited supervised physical clinical training experiences. Such knowledge and skills are fundamental to competent prescribing but have been limited or absent in training professional (i.e., clinical, counseling, school) psychologists. In one survey, more than two thirds of psychologists in independent practice described their training related to psychopharmacological issues as poor<sup>14</sup> (p. 50). This is not surprising given the limited psychopharmacology training in doctoral programs and psychology internships<sup>14</sup>.

Although advocates of prescription privileges readily acknowledge that additional training is needed to prepare psychologists to prescribe, the central questions are: (1) How much training is needed? (2) Is

it possible to attain adequate knowledge and skill through abbreviated training, such as proposed in models by the APA<sup>17</sup> or the California Psychological Association-California School of Professional Psychology Blue Ribbon Panel<sup>65</sup>? and (3) How would psychologists who undergo the proposed training measure up to other prescribers? The concern is that abbreviated "crash courses" are inadequate to make up for psychologists' deficits in medical education<sup>24,66</sup>.

At times, advocates for psychologist prescription privileges gloss over the complexity of knowledge sets inherent in competent prescribing<sup>25,56,57</sup>. For example, APA President, Patrick DeLeon, Ph.D., J.D., contends that "...prescription privileges is no big deal. It's like learning how to use a desk-top computer"<sup>67</sup>. Related speculation that technological advances, such as computer-assisted learning<sup>11</sup>, or prescriptive algorithms, could abbreviate the education necessary to prescribe competently strikes even proponents of prescription privileges as naive<sup>68</sup>. Similarly, it seems unlikely that relying on more active roles of pharmacists or computerized systems for administration of drugs would compensate adequately for gaps in prescribers' medical knowledge. Ultimately, competence in prescribing demands adequate understanding not just of psychology and psychopharmacology, but also of other domains of medical knowledge (e.g., human physiology, biochemistry, clinical medicine) and clinical proficiencies (e.g., physical examination) that historically have been excluded from the education and training of psychologists. More specifically, thorough understanding and proficiency related to two broad medical domains are required: understanding patients' (a) medical status prior to prescribing and (b) their medical status during and after treatment (i.e., their physiological responses to treatments)<sup>57,69</sup> (see Table 1).

There are scant data regarding how well prepared psychologists are to prescribe. Anecdotally, psychologists' confidence in diagnosing patients and providing other types of psychological treatment, combined with limited psychopharmacology training and informal exposure to medications may provide some sense that they have much of the knowledge related to prescribing. Thus far, however, little is known about how well the combination of doctoral training in psychology and relatively brief, focused training in psychopharmacology would develop psychologists' knowledge base and clinical proficiency for managing patients' medications, especially long-term and in diverse settings. Noteworthy differences exist between pharmacotherapy and current aspects of psychologists' clinical practice. As one psychologist turned psychiatrist observes:

"...the effects of medications on the kidney, the heart, and so forth is important for the use of many medications. Managing these effects is often crucial and has more to do with biochemistry and physiology than with psychology. I was surprised to discover how little about medication use has to do with psychological

principles and how much of it is just medical.”<sup>56</sup>  
(p. 5)

### TRAINING FOR PRESCRIBING

Proponents have construed prescriptive authority for psychologists as an “evolutionary” or “logical” step<sup>4,8</sup> or even a “right”<sup>5</sup> that is consistent with the trend in other health care disciplines toward broadened scopes of professional practice, including prescribing.

The first premise is debatable, especially given its fundamental departure from psychology’s historic training paradigms and conceptualizations of psychopathology and intervention. The education and training for a doctoral degree in psychology neglects key topics relevant to prescribing (i.e., the biological and physical sciences, physical examination). Also, psychology historically has questioned, de-emphasized, or even eschewed a “medical model”<sup>70,71</sup>. **Pursuing prescriptive authority reflects a profound change in direction toward embracing a medical model.** Adding prescribing to psychology’s scope of practice might more realistically be characterized as “revolutionary” or “radical”, requiring profound shifts in focus, marked expansions of training and continuing education in key areas, reformulation of accreditation criteria, modification of regulatory structures and processes, as well as uniform requirements that part of psychologists’ training occur within health care settings.

The second premise, that psychologists’ scope of practice should expand because some non-physicians such as physician assistants (PAs) and advanced practice nurses (APNs) prescribe, can also be disputed. Disparities in training between psychology and other professions with prescriptive authority challenge the notion that those professions’ scopes of practice justify expanding psychologists’ scope of practice to incorporate prescription privileges. Other professions’ training models are much closer to that of physicians than to psychologists and their clinical practice is more focused on physical functioning, including medication effects. Comparing the boundaries of their scope of practice with psychology’s is inappropriate given the differences in training.

Some non-physician healthcare providers have gained prescriptive authority<sup>11</sup> which is largely *dependent*, allowing them to prescribe generally under the *supervision* of or in collaboration with a physician. Other groups (e.g., dentistry) are independent, and generally use limited formularies often for specific purposes and limited periods of time. Notwithstanding these other professions’ relatively greater medical training and their generally *dependent* or limited authority, the APA<sup>19</sup> supports lobbying for *independent* authority. This is presumably because of psychologists’ independent licensure in regulating other aspects of their clinical practices, which makes them hesitant to cede control of any aspect of their practice to physicians or other professionals. However, it does not follow that proposed prescriptive authority for psychologists is justified by other disciplines’ prescriptive authority nor that if prescriptive authority is granted it should be independent because other

services within psychologists’ scope of practice already are.

The comparisons that advocates draw between psychology’s and other disciplines’ scope of practice compel closer inspection of the entry requirements and training models for psychology and other prescribing disciplines<sup>72</sup>. As outlined below, the difference in emphasis and structure are noteworthy. Since prescribing psychologists would probably be compared most closely with psychiatrists, our emphasis is on these two groups.

*Undergraduate Training.* The APA Task Force<sup>15</sup> noted that other health professions (e.g., nursing, allied health professions) require undergraduate preparation in anatomy, biology, inorganic and organic chemistry, pharmacology, human physiology, (and some require physics); undergraduate psychology degrees and admission to psychology graduate school *do not*. The biological sciences and related course work is the educational foundation for knowledge and conceptual understanding related to prescribing safely. Hence, the APA Task Force envisioned that students with strong undergraduate, post-baccalaureate, or early graduate biological backgrounds would be admitted to psychopharmacology training<sup>15</sup>. The problem is that such backgrounds are rare. A survey of psychology graduate students revealed that only 27% thought they had the undergraduate preparation to undertake training to prescribe<sup>20</sup>. Only seven percent had completed the recommended undergraduate biology and chemistry prerequisites<sup>14,15</sup>. Robiner et al.<sup>1</sup> found that psychologists had taken fewer than five courses in the biological and physical sciences during their undergraduate and graduate education.

Despite the opinion of the experts on APA’s own Task Force<sup>14</sup> recommending that psychologists seeking advanced psychopharmacology training would *require undergraduate* basic science prerequisites (i.e., biology, chemistry, etc.), the requirement was essentially deleted from the APA<sup>17</sup> training model. Instead, of specifying coursework in each area, the current APA<sup>17</sup> prerequisite is merely for “*demonstrated knowledge* of human biology, anatomy and physiology, biochemistry, neuroanatomy, and psychopharmacology” which could be based on coursework, or merely the “completion of a sequence of continuing education courses.” The psychopharmacology programs themselves can provide relatively abbreviated overviews of some of the relevant biological and physical sciences. Unlike medical school applicants and medical students, whose mastery of these areas is reflected through a competitive selection process (e.g., based on grades in biological and physical science courses, MCAT scores) and screened again in objective measures (i.e., national board scores such as steps one, two and three of the United States Medical Licensing Examination [USMLE]; specialty board examinations following residency), entry into proposed psychopharmacology training programs for psychologists would not require standardized, objective indices of applicants’ understanding of the biological and physical sciences.

It is not known whether competitive performance in biological and physical science courses with laboratory prerequisites would play any role in determining eligibility for psychologists' psychopharmacology training. In summary, the discrepancies between physicians' and psychologists' education in the biological and physical sciences, and objective mechanisms verifying that general scientific knowledge has been acquired, begin at the undergraduate level.

*Graduate Training.* Educational discrepancies between psychologists and physicians widen at the graduate level. The training of physicians and other doctoral providers (e.g., dentists) entails coursework in anatomy, biochemistry, cell biology, immunology, microbiology, pathology, pharmacology, physiology, as well as laboratory experiences in the biological and physical sciences and physical, clinical training. Doctoral-level psychology education never has<sup>73</sup>. Rather, graduate education in psychology has been characterized as comprising "vastly differing models of study and practice" with "no effort to standardize the training of psychologists"<sup>52</sup>. Programs vary in how much training is provided in the biological and physical sciences<sup>52</sup>, but it is generally quite limited for degrees in professional psychology. Some types of psychology degrees, (e.g., school psychology) have relatively limited exposure to psychopathology and psychological treatments, let alone the physical sciences<sup>49,74</sup> or medical environments.

The APA accreditation criteria for doctoral programs in professional psychology are minimal for biological and physical sciences. The APA requires exposure to (i.e., coursework in) "biological aspects of behavior", but does not specify the depth or breadth of this exposure nor require any training or practical experience in physical examination<sup>73</sup>. Similarly, doctoral program designation by the Association of State and Provincial Psychology Boards (ASPPB) and the Council of the National Register of Health Service Providers in Psychology<sup>75</sup> merely requires three graduate semester hours in the biological bases of behavior, which can cover a range of topics, such as physiological psychology, comparative psychology, neuropsychology, sensation and perception, or psychopharmacology. Their relevance to prescribing can be negligible.

If anything, the training of psychologists is moving away from the "scientist-practitioner" model, to other models that de-emphasize scientific background and activities<sup>76</sup>. By 1997, nearly two thirds of clinical psychology degrees were conferred by professional schools, rather than university-based academic programs<sup>77</sup> which typically require more rigorous scientific training. A recent survey suggests only 25% of psychology graduate students had courses in psychopharmacology<sup>20</sup>, and presumably fewer had courses in pharmacology or pathophysiology. These limitations are of greater concern than the limitations identified in medical students' psychiatric training<sup>78</sup> or estimates that medical school students receive only approximately 100 hours of pharmacology instruction<sup>79</sup>

(cited by the APA Task Force<sup>14</sup>); physicians' other didactics are relevant to prescribing and their longer supervised training includes additional exposure to related topics and patient populations.

By the time psychologists obtain doctorates most have obtained relatively little training that overlaps with that of physicians or other prescribers. Moreover, there are no objective quality assurance processes to ensure that the biological and physical sciences are well-understood by entrants to psychology graduate school or by entrants to proposed postdoctoral psychopharmacology training programs. For example, the **Examination for the Professional Practice of Psychology (EPPP), the written test required for licensure in psychology, queries minimally regarding knowledge of the biological and physical sciences (e.g., biochemistry)**<sup>80</sup>.

#### *Proposed Postdoctoral Level Psychopharmacology Training*

The current APA psychopharmacology training model is a diluted version of the original PDP training model, of the model recommended by APA's own Task Force, and of other proposed models<sup>14,65</sup>. Because these downgrades have not been well publicized, it is not clear whether psychologists surveyed about prescription privileges are aware of the changes and understand the limitations inherent in the current recommendations. APA's proposal for training programs comprise a minimum of 300 contact hours of didactic instruction (part-time or full-time) and generally part-time supervised practice for a minimum of 100 patients of unspecified duration<sup>17</sup>. The CPA-CSPP Blue Ribbon Panel advised more training than the APA (395-570 contact hours and an 18 month practicum). This compares with a total estimate of 1,796 contact hours of course work in medical school<sup>65</sup>. These discrepancies beg the questions what would be left out and how does the deleted content detract from clinical pharmacology practice? The APA stresses that the proposed training is "unique to the needs of the practicing psychologist, and does not simply follow traditional medical practices"<sup>17</sup> (emphasis added). We question whether such condensed training overcomes current shortcomings to achieve knowledge and clinical proficiency equivalent to that of other prescribers, especially psychiatrists, and ensure competent prescribing that the public would and should expect of its doctors?

**Although in the APA<sup>17</sup> model, the psychopharmacology training programs are "postdoctoral" in the sense that trainees have already obtained their doctorates in psychology, they are not "postdoctoral fellowships" in the traditional sense of scientific, medical, or professional psychology postdoctoral fellowship programs and are not comparable to psychiatric residencies or fellowships.** Therefore, the APA<sup>17</sup> aptly refers to the training more generically as a "postdoctoral experience." However, in content and structure, they might be more comparable to PA or accelerated APN training or to basic levels characteristic of predoctoral practica

training within psychology. The psychopharmacology training programs do not meet the APA's<sup>73</sup> own criteria for accreditation as postdoctoral programs or internships. Some of the programs award certificates or master's degrees, so describing them as postdoctoral may mislead. Similarly, borrowing medical terminology of "residents" for training at this level also may misinform because the level of training is more basic than medical residencies or psychology postdoctoral fellowships. The training programs are presumably funded by trainees' tuition revenues (c.f. Graduate Medical Education funding). The publicity materials for the programs we informally reviewed did not uniformly identify undergraduate prerequisites in scientific areas (e.g., biochemistry, physiology, etc.) which had been outlined in the APA Task Force Report<sup>14</sup>.

Proponents of prescription privileges recognize that the supervised practice in proposed psychopharmacology training "essential for effective, safe, ethical and practical incorporation of drugs into a psychological practice...is a substantive matter"<sup>81</sup> (p. 218). Curiously, despite recognition of this substantiveness, the scope and requirements for supervised pharmacotherapeutic practice are not fully delineated in the APA<sup>17</sup> model, so it is not yet possible to evaluate how adequate the supervised practice would be. Consistent with the APA model, training programs are designed for trainees to see a series of patients (e.g.,  $\geq 100$ ) for psychopharmacologic management. The APA model fails to specify minimal criteria for: (a) the breadth of patients' mental health conditions; (b) the duration of treatment (i.e., to allow for adequate monitoring and feedback) or requirements for outpatient or inpatient experiences; (c) exposure to adverse medication effects; nor (d) exposure to patients with comorbid medical conditions and complex drug regimens. Also, the qualifications for supervisors are vague. Whereas the CPA-CSPP Panel<sup>65</sup> recommended an 18 month practicum, the APA<sup>17</sup> model does not specify any length. That the didactic and practical training would be abbreviated relative to the PDP, and less likely to occur in organized, academic health care settings with lengthy track records of providing medical or psychiatric training raises questions about how comparable such programs would be to the PDP?

We doubt that the proposed models of training in psychopharmacology for psychologists<sup>17,65,81</sup> would prepare them to provide care equivalent to that provided by psychiatrists, or other health professionals. Not only would they obtain less didactics, but the supervised pharmacologic care of patients would be considerably less comprehensive and less well-organized than training within psychiatric residencies.

#### ACCREDITATION ISSUES

It is essential that the prescriptive debate address accreditation, regulatory, and legal issues. Formidable accreditation and regulatory challenges exist to psychologist prescribing. The APA<sup>17</sup> model legislation allows pharmacology training programs to be any "organized program of intensive didactic instruction"

and does not specify that the program itself be accredited or be sponsored by an accredited educational institution. That is, the psychopharmacology didactic programs do not need to be scrutinized by external evaluators who determine how well they conform to the APA<sup>17</sup> model, or their future revisions, or to any other criteria related specifically to psychopharmacology training. Similarly, the clinical practica are not accredited or overseen in any manner. In this way, the programs differ fundamentally from other types of applied training in psychology and from the training of other health professions with prescriptive authority.

Focused accreditation guidelines and accreditation mechanisms are lacking to provide oversight of psychopharmacology training programs (e.g., specific requirements for the breadth of patients seen and how long patients' medications are managed; qualifications of supervisors) to verify that training programs actually meet even minimal standards for didactics and supervised practical training. Unlike accreditation of psychiatric residencies, the APA has no experience accrediting programs providing training specifically in psychopharmacology or more generally in the practice of medically based procedures (e.g., physical examinations). Thus far, the APA has accredited only six postdoctoral programs across all areas of psychology, none of which are the type of psychopharmacology training described herein. Hence, APA's capacity to provide oversight at the postdoctoral level at all, and in psychopharmacology specifically, is largely unknown. How well the psychopharmacology training programs meet the APA<sup>73</sup> criteria for accreditation of postdoctoral programs warrants ongoing scrutiny and raises questions about whether referring to them as postdoctoral programs is appropriate. Similarly how adequately the APA accreditation criteria (which were not designed for psychopharmacology programs) ensure the quality and breadth of training for psychologists to develop sufficient skills to attain prescriptive authority deserves further consideration. Given that existing psychology doctoral and internship programs generally lack the faculty capable of teaching courses and supervising practical experiences related to prescribing<sup>5,9,42</sup>, this is not a trivial concern. How well training programs in psychopharmacology would comply with more general types of practice guidelines, such as the supervision guidelines promulgated by the Association of State and Provincial Psychology Boards (e.g., ratio of trainees to supervisors) also is not known<sup>82</sup>.

#### REGULATORY AND LEGAL ISSUES

Health regulatory boards are mandated to protect the public. The capacity and effectiveness of psychology boards to review the competence of psychologists who seek prescription privileges and regulate prescriptive practices is unproven. Boards endeavor to fulfill their responsibilities by reviewing credentials, establishing requirements for objective examinations, and investigating practitioners' practices (generally in response to complaints). Whether and how well boards could develop the sufficient expertise

to assess psychologist prescribers' practices to protect the public is not clear given the current limitations of psychologists' training and responsibilities related to prescribing. Thus far, psychology boards have not regulated prescribing. Boards are likely to lack members and staff competent to evaluate prescribing patterns or competence. If jurisdictions grant prescriptive authority, it seems likely that boards will be severely challenged to do so at levels that effectively protect the public. Regulatory boards' efforts to regulate prescriptive practices will inevitably add costs to the regulatory process, and may decrease their autonomy by making them reliant on the expertise of professionals other than psychologists.

A number of legal issues also would arise if psychologists are granted prescriptive authority. This includes the level of independence vs. dependence of this authority, potential restrictions on their prescriptive practices (e.g., limited formulary and duration of treatment; specific settings) and the most appropriate standard of care to which psychologists would be held. Would psychologists be compared with other "reasonably prudent" psychologists who have undergone the proposed psychopharmacology training, or with other prescribers, such as psychiatrists, who have greater training and experience related to medication management, and who have set the standard up until this time? From the consumer's perspective, it seems likely that a standard of care closer to that provided by psychiatrists would promote accountability and afford greater protections and legal remedies than an unknown, less stringent, or evolving standard based on psychologists who might gain prescriptive authority based on training that is less intensive than that of other prescribers.

#### **PROponents' FOCUS ON PERIPHERAL ISSUES**

In waging a campaign for prescriptive authority, proponents tend to focus on certain charged and arguably disingenuous issues to promote their cause, rather than on the inadequacies in psychologists' education, knowledge and skills in areas which are critical to competent prescribing<sup>1</sup>. For example, DeLeon and Wiggins<sup>11</sup> decry problems of current prescribers as if psychologists (who would have less extensive physical science backgrounds and more limited supervised prescriptive practical training) would avoid developing problematic patterns if they prescribe. Alternative strategies, such as enhancing the ability of current prescribers through such means as education and redesign of prescribing systems<sup>83</sup>, or enhancing psychologists' collaborative practices, as proposed in the APA Task Force's<sup>15</sup> Level 2 training, might address such problems without requiring that psychologists prescribe.

Similarly underserved populations (e.g., rural populations, the seriously and persistently mentally ill [SPMI], the elderly) have been invoked to frame prescriptive authority as a policy response to meet pressing societal needs<sup>18,84</sup>. This line of reasoning is flawed in that it fails to consider the similar access

patterns to psychologists and psychiatrists across the urban-rural continuum<sup>85,86</sup> and the APA Task Force's<sup>14</sup> expectation that only "a small...minority of psychologists" (p. 106) would seek Level 3 psychopharmacology training. Such data and predictions, along with the virtual absence of any concrete plan to redistribute prescribing psychologists to meet the actual needs of underserved populations, render broadening psychologists' scope of practice to include prescriptive authority an indirect, unnecessarily risky, and highly inefficient public policy response to rural areas' shortage of psychopharmacologic prescribers. There is no reason to assume that psychologists with prescriptive authority actually would relocate to areas lacking other prescribers, or would focus their practices to address the needs of other types of underserved populations<sup>24,36,47</sup>. Even some proponents of prescriptive privileges concede that psychologists may not be more inclined than psychiatrists to work with underserved groups<sup>18</sup>.

Rationalizing the prescriptive agenda on the basis of underserved populations also ignores efforts by the American Psychiatric Association to enhance psychiatric consultation to primary care providers<sup>87</sup> and the potential benefits of expanded use of telehealth technology to supplement the expertise of primary care practitioners in areas underserved by psychiatrists. Similarly, it ignores data that psychiatrists see significantly more of the SPMI and socially disadvantaged than do psychologists<sup>88</sup> which brings into question whether prescriptive authority would have a major impact in expanding care to SPMI populations. Pursuing prescriptive authority may distract focus from important opportunities for psychologists to improve their collaborations with primary care providers to collectively address needs as suggested by groups such as the National Depressive and Manic-Depressive Association<sup>89</sup> or the National Alliance for the Mentally Ill (NAMI). The APA Task Force report acknowledged that Level 2 training would help meet the clinical needs of underserved populations<sup>14</sup> (p. 87), so one might logically ask, is Level 3 really needed? If the energy and resources psychologists are currently investing into advancing the prescriptive privilege agenda were instead refocused on both Level 1 and 2 training and on developing mechanisms to redistribute the psychology workforce to address legitimate societal needs (e.g., rural mental health), would not underserved populations truly be better served?

Arguments favoring prescriptive authority as a response to problems previously identified for some populations may be outdated. They overlook the successes of programs such as the N.I.M.H. Depression/Awareness, Recognition and Treatment (D/ART), the National Public Education Campaign on Clinical Depression, and the dissemination of practice guidelines<sup>90-92</sup> which appear to be enhancing general awareness and the assessment and pharmacologic treatment of psychiatric patients by primary care practitioners<sup>89,93-95</sup>. Similarly proponents' focus on underserved populations raise unsettling questions about whether they believe that such populations

deserve care by clinicians who have adequate training and expertise to undertake the management of their medication, or whether it should be left to those whose training is controversial even to educators and non-trivial numbers of practitioners within their own profession.

Another rationale of proponents of prescription privileges is that many mental health services, including prescriptions of psychotropic medications, are provided by non-psychiatric physicians, who have little psychiatric training<sup>11</sup>. Indeed, the general medical sector is an essential component of the mental health system, serving an estimated 40-50% of people with mental disorders according to the utilization data of the Epidemiologic Catchment Area (ECA) study<sup>96</sup>. Similarly, data from the National Ambulatory Medicare Care Survey (NAMCS) reveal that outpatient appointments with primary care physicians and medical specialists account respectively for 48% and 19% of all appointments involving psychoactive prescription drugs: More than the appointments with psychiatrists (33%)<sup>2</sup>. General physicians provide somewhat more of the nation's outpatient mental health services (35%) than either psychologists (31%) or psychiatrists (27%)<sup>88</sup>.

According to DeLeon and Wiggins<sup>11</sup> an estimated 135.8 million prescriptions for psychoactive medications were written in 1991, of which only 17.3% were by psychiatrists. Such statistics do not indicate how many of these physician interactions for prescriptions are enhanced by consultations involving psychiatrists, psychologists, or other mental health professionals, or how many truly need mental health consultation. There are no benchmarks for how many prescriptions non-psychiatric physicians should write or what percentage of them ought to be informed by collaborations with mental health professionals. It is possible that the large number of prescriptions written by non-psychiatric physicians reflect that consultation with mental health professionals may be necessary only for subgroups of patients, or that adequate consultation already occurs related to many patients who might need medication. Moreover, despite DeLeon and Wiggins<sup>11</sup> focus on such patterns, the numbers reveal nothing about problematic patterns of prescribing by physicians nor do they persuade that psychologists also should prescribe. They probably do reflect several factors, for example, that some people are more comfortable seeing their primary care physician than a mental health professional<sup>97,98</sup> and that managed care organizations and capitated systems encourage primary care physicians to treat mental disorders rather than refer to mental health professionals<sup>2</sup>. Such systems of health care delivery are similar to the service delivery models in other countries (e.g., Great Britain), where lower per capita rates of psychiatrists reflect psychiatrists' roles as specialist consultants to nonpsychiatric physicians who play primary roles in the psychopharmacological management of many patients' care<sup>99</sup>.

The widespread prescription of psychoactive agents by non-psychiatrist physicians reflects the

significant opportunities for psychiatrists and psychologists (especially those with Level 2 training) to collaborate and consult about psychopharmacology. The data confirm the importance of continuing the ongoing efforts to enhance psychopharmacology training of non-psychiatric physicians and other prescribers rather than demand that psychologists prescribe.

## MEDICATION ERRORS

Although newer psychoactive medications have more favorable side effect profiles than previous generations of medications, they are powerful drugs which can yield serious adverse effects<sup>52,100,101</sup>. The timing of the intensification of psychologists' lobbying for prescriptive authority is ironic in light of growing national concern about errors in prescribing medication<sup>102</sup>. Nationally, medication errors are estimated to lead to as many as 7,000 deaths annually<sup>103</sup>. The Federal Drug Administration currently receives 235,000 reports per year about adverse drug events<sup>104</sup>. This could increase as medication options expand, requiring constant upgrades in knowledge of the entire pharmaceutical spectrum. In 1998, the FDA approved 90 new drugs, 30 new molecular entities, 124 new or expanded use of agents, 344 generic drugs, not counting over the counter and orphan drugs<sup>105</sup>. That nearly half of the drugs currently marketed have become available in the last decade<sup>106</sup> suggests that the knowledge base for prescribing is becoming even more complex, requiring yet more extensive scientific understanding.

Among the many contributing factors to medication errors are *inadequate knowledge* and use of knowledge regarding drug therapy and inadequate *recognition of important patient factors* (e.g., impaired renal function, drug allergies)<sup>83</sup>. The influence of other factors that require more sophisticated scientific understanding, such as genetic variation in drug metabolism and uptake, are increasingly likely to effect prescribing. Along with other recommendations, Lesar et al.<sup>83</sup> recommended improved prescriber education: Not creating new categories of prescribers with relatively less training, as psychologist prescribers would be.

Given the paucity of education and training directly related to prescribing throughout undergraduate and graduate training in psychology<sup>1</sup>, the scant data about psychologists' proficiency in managing medications which is limited to a few individuals, as well as inadequacies in psychologists' knowledge related to psychopharmacology<sup>1</sup>, we doubt that abbreviated psychopharmacology training for psychologists would be sufficient to ensure adequate competence in prescribing. Moreover, we are concerned that they lack the medical expertise to recognize, assess (e.g., all relevant hematological assays), and understand adverse effects and initiate proper medical care. Short cuts in education seem likely to undermine patient care and contribute to medication errors along the patterns outlined by Lesar et al.<sup>83</sup> Such training, especially if paired with

independent prescriptive authority, risks generating a wave of suboptimal medication management and potentially avoidable adverse drug events. In addition to potentially hazardous consequences for patients, problems associated with psychologist prescribing would present regulatory conundrums, provide a new basis for litigation, and ultimately could detract from the public's esteem of psychologists in general.

### CLOSING CONSIDERATIONS

We appreciate the important roles psychologists play within the delivery of health care broadly and mental health care in particular. Our findings and conclusions in no way belittle psychologists' knowledge or proficiencies in other areas. We agree with the APA Task Force<sup>14</sup> that it would be beneficial to promote psychologists' psychopharmacology knowledge so as to inform and enhance their collaborations with primary care providers and psychiatrists in providing care to patients who need medications. However, achieving the APA Task Force's goals for enhancing the care of patients needing medications does not require prescriptive authority for psychologists. Instead, we recommend that the APA refocus its energies to better educate psychologists about psychopharmacology to enhance the psychological services that psychologists provide and their collaborations with prescribers. This is a type of training that most psychology graduate students need and would welcome<sup>20</sup>.

Unfortunately, if psychologists prescribe, medically complex patients (e.g., older patients taking multiple medications) would be most vulnerable to the shortcomings in psychologists' scientific and medical training<sup>51,52</sup>. Promoting psychologists' collaboration with prescribers rather than prescription privileges would preclude new risks to patients associated with a potentially suboptimal level of care. Collaboration would avoid further confusion about psychologists' identities<sup>15</sup>, skills, scope of practice, and the differentiation between psychology and psychiatry<sup>97,107</sup>.

If legislatures grant psychologists prescriptive authority, other mental health professionals (e.g., social workers, marriage and family therapists) whose training similarly has not been designed to prepare them to prescribe, may in time be emboldened to advocate for prescriptive authority for themselves based on modules of psychopharmacology training similar to those proposed for psychology. Would proponents of prescription privileges for psychologists support similar developments in other mental health professions or become concerned about the potential for adverse effects on patient care?

As psychologists, educators of psychologists, and related health professionals, the authors have actively supported psychology's many other advances (e.g., Medicare reimbursement, licensure), including appropriate, innovative roles of psychologists in health care<sup>108</sup>. We caution against framing the debate about prescription privileges as a chapter in the saga of struggles between psychology and psychiatry<sup>11</sup>. Rather, at its core it is a controversy about the education and

training necessary to promote safe and effective treatment that limits unnecessary risks to patients.

We question whether the shortcomings in psychologists' education and knowledge related to prescribing can be surmounted through abbreviated training. Our doubts that they can lead us to urge psychologists to resist the temptation to venture into aspects of health care (i.e., prescribing) for which they are not well-prepared. As legislators and regulators are lobbied about psychologists' prescriptive privileges agenda, they will need to weigh judiciously any hoped-for benefits against the risks associated with the clear inadequacies in psychologists' preparation to prescribe, even after they obtain the psychopharmacology training proposed by the APA<sup>17</sup>.

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Table 1

## Knowledge Base and Clinical Proficiencies Required for Prescribing

Psychopathology and Psychological Issues	Medical Status Prior to Prescribing	Response to Treatments
Primary psychiatric conditions	Comorbid medical conditions	Knowledge of adverse reactions - side effects - toxic effects
Comorbid psychiatric conditions	Contraindications	Ability to recognize, diagnose, and treat adverse reactions
Prevalence and course of psychiatric conditions	Long-term effects of medication	Ability to differentiate between physical and psychiatric effects of psychoactive agents and concurrent medications
Knowledge of non-pharmacologic treatment options	Medical effects of concurrent treatments - drug interactions - other treatments (e.g., dialysis, plasmaphoresis)	Other issues related to monitoring, titrating or discontinuing prescribed medications
	History of medication use	

Note: The education of psychologists typically addresses column 1, but neglects columns 2 and 3.

**AUTHORS' FOOTNOTE**

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