

**A Report on the Professional Psychology
Internship Match Imbalance**

**Prepared by the APA Education Directorate
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Introduction

The outcome of the February 2007 Association of Psychology Postdoctoral and Internship Centers (APPIC) match saw 25% of students in the match fail to obtain an internship position as of "Match Day." An additional 5% withdrew from the match prior to match day. This was the largest imbalance between the number of applicants seeking an internship position and the number of available positions since the inception of the computerized (APPIC) match system in 1999. The magnitude of this discrepancy has once again focused the attention of the professional psychology education and training community on this issue. While the current situation may be considered at a crisis or "tipping point" by many, the imbalance between students seeking internships and the number of available internship training slots in the match has a long history within professional psychology.

In March 2007 the Board of Educational Affairs discussed the internship match imbalance and approved the following motion:

"That BEA request APA staff to develop a comprehensive study of the internship match problem. This work would be developed in consultation with relevant parties and organizations and would address the following:

- the nature of the problem
- implications for APA policy and initiatives, and
- potential pathways for BEA to consider in solving the problem in both the short and long term"

This report is submitted in response to that charge from BEA. A number of organizations and individuals assisted by providing information that was instrumental in the preparation of this report. This support was offered graciously and generously. Appreciation for this assistance is offered to the Council of Chairs of Training Councils (CCTC), APPIC with a special thanks to the APPIC Chair Dr. Steve McCutcheon and the APPIC Match Coordinator Dr. Greg Keilin, the California Psychology Internship Council (CAPIC), the Association of Counseling Center Training Agencies (ACCTA), the Association of State and Provincial Psychology Licensing Boards (ASPPB), the American Psychological Association of Graduate Students (APAGS) and the APA Center for Psychology Workforce Analysis and Research (CPWAR). While the input of these individuals and groups was critical, this report should not be construed to represent the opinions of or policies of those who contributed.

The report will provide a detailed overview of the problem which will present what is known and not known about the internship match imbalance and a number of relevant issues facing professional psychology education and training. This overview will provide a picture of what professional

psychology currently looks like as a career path. Specifically, in describing the nature of the problem the report will:

- detail the scope of the current internship match imbalance
- provide a brief overview of the history of internship training in professional psychology
- discuss the internship match imbalance within the context of the professional psychology workforce and broader workforce issues
- highlight pertinent issues in professional psychology internship training of relevance
- review the major data sets relevant to the internship match imbalance, including what conclusions can be drawn from these data
- address what actions have been taken related to the imbalance

The report also will outline the implications of the issues for both APA policy and initiatives. The report concludes with a review of the overarching issues and potential pathways to address them in the short, mid, and long term.

Nature of the Problem

Scope of the Current Internship Match Imbalance

The following table provides a summary of the APPIC match day results for the past five years:

APPIC Match Day Statistics 2002-2007							
	2002	2003	2004	2005	2006	2007	5 year change
Number of Applicants	2,842	2,963	3,039	3,117	3,210	3,430*	625 (+20%)
Number of position offered	2,752	2,718	2,732	2,757	2,779	2,884	132 (+5%)
Difference (imbalance)	(90)	(245)	(307)	(360)	(431)	(546)	
Number of applicants unmatched as of match day	432 (15%)	533 (18%)	611 (20%)	669 (21%)	731 (23%)	842 (25%)	410 (+95%)
Number of available positions unfilled	342 (12%)	288 (11%)	304 (11%)	309 (11%)	300 (11%)	296 (10%)	

*268 students withdrew from the APPIC match process and are not reflected in the 2007 figures

This table reflects that growth in the number of applicants has outpaced growth in the number of internship slots in the APPIC match system at a rate of 4:1 over the past five years. Further, approximately 22% of students who intended to seek an internship in the 2007 APPIC match would not secure a training slot for no other reason than the lack of available positions. For those who were seeking an internship on match day, 25% were unmatched.

What happens to students who are unsuccessful in the APPIC match?

APPIC offers a "clearinghouse" following match day in which programs who have unfilled slots and applicants who have not matched can locate each other. The clearinghouse is facilitated by APPIC, but not overseen in the way the regular match process unfolds. Typically positions are filled quickly thus calling into question whether applicants (and programs) are making the best decisions for their training needs or merely availing

themselves of an opportunity for an internship position or for an available trainee. Estimates by APPIC are that approximately 20% of positions offered through the clearinghouse are in APA accredited programs. The Association of Counseling Center Training Agencies (ACCTA) also offers a clearinghouse, for member programs only. In 2007, 229 individuals entered the ACCTA clearinghouse where only 14 positions were available.

Estimates from APPIC and the CPWAR (CPWAR, 2007) predict that:

- 27% of those unmatched will locate positions through the APPIC clearinghouse (APPIC)
- 45% of unmatched students (n=500) will re-enter the match in 2008 (APPIC)
- as of October 2007, 123 of the 332 students who were not matched had either dropped out of the match without placement or were still seeking placement (CPWAR)
- 28% of unplaced students will locate or create an internship experience outside the APPIC system (APPIC)
 - Of these, 5% will "create" their internship experience and 7% will attend an internship that was previously deemed unacceptable to their graduate training program

Thus, more than 8% of those students who enrolled in the APPIC match will locate or create an internship that is outside the APPIC system. This figure is consistent with preliminary survey data collected by the APA Center for Psychology Workforce Analysis and Research (CPWAR) as of October 2007 that indicate, in a sample of approximately 1200 students seeking internships in 2007, 8.7% had secured an internship that was neither APA accredited nor an APPIC member program (CPWAR, 2007). APPIC members are doctoral programs that have met APPIC membership requirements either by being APA accredited or through submitting an application to APPIC which undergoes a paper review to determine whether the program meets APPIC membership criteria. According to data reported in the 2007 APPIC match directory 459 of the 631 APPIC members are APA accredited internships (72.7%) and they offered 2271 full time positions (78.7%) in the 2007 APPIC match. Nonaccredited programs reported that they offered 616 full time positions (21.3%).

Sources of Missing Data

While there is valid argument that professional psychology is experiencing an internship match imbalance specific to the APPIC match, it must be asked, considering all the pathways by which professional psychology internships can be secured, is there an overall internship imbalance? It must be noted that the APPIC match figures *do not* reflect the entire pool of applicants actually seeking professional psychology internships

as a number of students do not participate in the APPIC match process. While the exact number and nature of those obtaining internships through other means than the match is not entirely known, the following sources have been identified. A number of students from APA accredited doctoral programs do not appear to be entering the APPIC match as evidenced by information provided by doctoral programs on their annual reports to the APA Committee on Accreditation (CoA). For example, information from the preliminary 2006 annual reports for APA Accredited Doctoral Programs indicates that 3,916 students sought internships. The number of applicants who enrolled in the APPIC match that year was 3210. This reflects a difference of 706 students who sought internships outside the APPIC match. Similarly, the difference was 702 for 2005. Further, given that it is not required to be enrolled in an APA accredited doctoral program to participate in the APPIC match, this number may in fact be an underestimate. For example it is known that 425 of the 3984 individuals who took the EPPP between August 2006 and July 2007 were from non-accredited doctoral programs. Since these students are seeking internships and are not necessarily captured by existing data sets, the quality and nature of their internship training experience is unknown.

In addition, some students in school psychology programs do not seek licensure as a psychologist and may not take part in the APPIC match. These students, seek internships that meet the Council of Directors of School Psychology Programs guidelines for internship training in school psychology.

Another large population not captured through the APPIC match statistics are students who participate in the match process sponsored by the California Psychology Internship Council (CAPIC). CAPIC sponsors their own internship match which occurs after the APPIC match. CAPIC internship positions are ONLY offered through CAPIC match. CAPIC requires that internship programs submit an application and receive approval in order to participate. Participants may or may not have participated in the APPIC match, and, if they did, they were unmatched in the APPIC match. The CAPIC match offered 620 internship positions in 2007, which is lower than the 717 offered the previous year. A majority of CAPIC positions are half-time (in 2007, for example, 436 positions were half-time). CAPIC does not require that interns be provided a stipend. In the 2007 match, only 300 of the CAPIC positions were funded with a mean full-time stipend of \$9,700 as compared to a mean of \$22,400 for programs that participated in the APPIC match.

In sum, data from APPIC and the APA CoA suggest that a large number of students are seeking internships outside the APPIC match system. APPIC figures suggest 300 students will do so in 2007. Further, these figures do not include students from APA accredited programs who do not even register for the match, data from the most recent year available put that number at 706. Finally, while it must be noted that the CAPIC

system offers mechanisms for review of internship programs, this represents another large pool of individuals receiving training outside the APPIC system, a figure of 620 in 2007. While the field does not have a clear grasp on the exact numbers in the internship pipeline, the size of these numbers cannot be ignored.

History

Internship Training in Professional Psychology

The formalization and attention to quality assurance of professional psychology internship training in the United States traces back to the mid-1940's following the end of World War II and can be largely credited to events occurring within and related to services provided by the Veteran's Administration (now referred to as the Veteran's Health Administration or VHA). Several key events occurred that are relevant considerations in understanding the current imbalance issues. These include the establishment of professional psychology as a doctoral level profession, allocation of federal funding to support education and training, and the affirmation of the importance of quality assurance mechanisms to evaluate education and training programs.

As the number of veterans increased dramatically following World War II, attention was focused on health care delivery, including mental health services. At that time the demand for psychologists exceeded the supply (Fowler, 2002). The VHA hired more psychologists to meet these needs and increased the workforce from 146 staff psychologists in 1946 to 612 in 1958. Further, the VHA enacted a standard that psychologists were to be doctoral level and to be graduates of an APA accredited program.

The need for psychologists to meet the demand for services within the VHA also resulted in resource allocation to doctoral programs that could provide appropriate training. To do so, in 1945 the VA asked the APA Committee on Graduate and Professional Training to identify and accredit doctoral programs that could provide doctoral training in clinical psychology. At that time, 22 programs were identified (Fowler, 2002). The US Public Health Service made a similar request during this time period (Nelson, 1998). That is, funding would be allocated for education and training to meet the need for more clinical psychologists, but such was contingent on identification of quality education and training programs by APA. The VHA worked closely with APA to infuse more training in doctoral programs and in the fall of 1946 the VHA funded 200 doctoral trainees who worked half-time in a VHA facility. By the mid- 1950's almost half of all interns in psychology had received training in the VHA system.

In 1947 the APA Committee on Training in Clinical Psychology was appointed by the APA president and authorized to: [1] outline a

recommended training program in clinical psychology, [2] formulate standards for institutions that provide training, and [3] study and visit such institutions and [4] provide a report on them. In 1947, forty institutions submitted information about their programs to the Committee, which evaluated each program according to 13 developed criteria (Sears, 1947). This review was strictly of materials submitted by the programs as the Committee determined that visiting each program was not possible at that point in time. The review of the Committee revealed that 18 institutions met all the criteria, and 11 had minor needs to meet. The first program visits occurred in 1948 (Committee on Training in Clinical Psychology, 1948). Interestingly, the 1949 report of the Committee noted that while students appeared to be better prepared for service careers than in the decade past there were limited training staff, inadequate training facilities, a need for greater attention to the number of students that can be accommodated by a program, and an emphasis on training in clinical techniques at the expense of research training (Committee on Training in Clinical Psychology, 1949).

The Boulder Conference in 1949 called attention to an emerging model of training in clinical psychology, leading to the preparation of doctoral level psychologists who were prepared for service provision and gave rise to what is known as the scientist-practitioner model (Raimy, 1950). The conference report highlighted a need for standards for internship training and a mechanism for evaluating internship centers and recommended that APA be the organization to undertake this task (p. 109). The report went on to describe inadequate numbers of "qualified centers" for students to receive internship training, difficulties in funding students while on internship, and argued that standards for internship training may need to be aspirational until such time as there were adequate supplies of psychologists and other mental health providers to meet service demands (p. 113-114). Despite this early focus on quality and the recognition of such through accreditation it was not until the mid-1950s that APA began to accredit internship programs. However, in its earliest phases the APA Committee on Evaluation charged with program evaluation experienced logistical and resource difficulties which prohibited it from adequately conducting site visits.

History of the Professional Psychology Internship Match Imbalance

Examination of the data that have been collected regarding the ratio of available internship slots to applicants suggests a long-standing history of an internship match imbalance. Tuma and Cerny (1976) noted that for the five year period beginning with 1971-72 the number of graduate students seeking internships exceeded the number of positions available with the exception of the year 1971-72. They predicted non-placement rates of 6%, 13% and 14% for the years 1976-77, 77-78 and 78-79. Students enrolled in APA accredited doctoral programs were more likely than students in

nonaccredited programs to obtain an internship in an accredited program and to obtain an internship in general. In one of the few studies to the contrary, Stedman, Solway, Zimet and Carrington (1991) concluded that in 1988-89 the number of available internship positions offered by (then) APIC was slightly higher than the number of students applying for internship.

Data reported from the 1990's reveal that consistently the number of students seeking internships exceeded the number of available positions.

Study	Population Surveyed	Year and Match Rate					
		1995	1996	1997	1998	1999	2000
Thorn & Dixon (1999)	APA-accredited programs, post-match day	93%	89%	92%			
Dixon & Thorn (2000)	APA-accredited programs, post-match day				83%		
CPWAR (2001)	APA-accredited programs, match day					85%	83%

However, it must also be noted that the number of internship positions has continued to grow. For example, Oehlert and Lopez (1998) examined the supply of APA accredited internship slots and described a gradual increase from 1987-88 (1,604 slots) to 1998-99 (2,094 slots). They also noted that the number of students seeking an APA accredited internship for the 1996-97, 1997-98, and 1998-99 would exceed the number of available positions by 288, 329 and 327 respectively.

The available information suggests that as far back as the 1970s, with few exceptions, the number of internship positions has been less than the number of applicants.

Workforce Issues

Given that there has been an ongoing imbalance in the number of internship applicants and internship positions in the match system, it has been asked: What are the needs for the psychology workforce? Thorn and Dixon (1999) and Dixon and Thorn (2000) based on findings from two surveys of internship applicants and training directors highlighted the relatively slow growth in internship positions vs. applicants over a five year period and raised concern about the long-term employment outlook for psychologists given this trend, specifically the issue of an oversupply of psychologists.

The issue of the psychology internship match imbalance is embedded in the issue of the larger psychology workforce needs. Discussion to date has reached no firm conclusion as to the adequacy of the psychology

pipeline to meet the workforce needs of the profession. Robiner in 1991 and Robiner, Ax, Stamm and Harowski (2002) argue that given the dramatic increases in the number of psychologists being trained and subsequently entering the workforce it is only a matter of time before there will be more psychologists than there is need. VandenBos, DeLeon and Belar (1991) challenged Robiner's conclusions noting that psychology's increasing presence as a health care profession and not just a mental health profession had not been adequately accounted for and that discussion of limiting the supply of psychologists was premature.

In general, the healthcare workforce is predicted by the Bureau of Labor Statistics to comprise one of every five new jobs in 2014 (Collier, 2007). Further, predicted rates of health care graduates are not expected to meet the need. While comprehensive information is not available, employment forecasts for psychologists specifically from the Bureau of Labor Statistics estimate that the need for clinical, counseling, and school psychologists will increase from approximately 167,000 in 2004 to 199,000 in 2014, a 19% increase. In that these data do not include Psy.D.'s it is questionable how reflective they are. Additionally, while the health care sector represents an area of potential need for psychologists, this represents only a segment of the total psychology workforce.

In order fully to understand the need for psychologists and in what types of settings, a comprehensive workforce analysis such as is commonly conducted in other professions is needed. This has not yet been done by psychology for psychology. However, with the recent APA Council policy (2006) that APA should have a workforce analysis capability, the CPWAR is in the process of evolution. Results of future work should enable a picture of the employment outlook for psychology based on solid data.

Workforce Issues and Employment Outlook for New Doctoral Recipients

Available data from the APA CPWAR suggest that new doctoral recipients may have a less than ideal economic outlook (CPWAR, 2007). In a survey of approximately 2000 of those who earned a doctorate in psychology in the year 2005, 23.6% reported underemployment while 55% described the job market as good or excellent. Only a bit more than half (58.3%) indicated that their doctoral degree in psychology was required for their current position. Average starting salaries were reported at just under \$50,000 for an assistant professor and \$52,000 for someone in a human services position.

Further, data on debt load of new doctoral recipients reveal the following. Overall, the number of students who incur some debt related to obtaining their doctorate has remained fairly constant in the period from 1996 to 2005 (67.3% vs. 69%). What is striking is that the amount of debt has risen dramatically in that time period as illustrated below:

Debt Related to Doctoral Training	Students Preparing to Provide Health Services		Students Preparing for Research/Other Positions	
	1996	2005	1996	2005
Any debt	72.3%	76.8%	57.3%	52.3%
Average debt	\$37,000	\$79,000	\$21,000	\$46,500
Median	\$30,000	\$70,000	\$15,000	\$35,000
75 th percentile	\$50,000	\$113,000	\$30,000	\$70,000
Debt in excess of \$75K	11%	44.9%	.6%	22.5%

Doctoral Employment in Psychology, CPWAR 2005 and 1996 Surveys

A majority of students earning doctoral degrees in psychology are incurring debt. However, for those preparing for careers in health service provision the amount of debt is substantially greater than for those preparing for research or other types of positions. Further, debt load also appears associated with the type of doctoral program:

	By Degree Type		
	Ph.D.	Ed.D.	Psy.D.
Mean debt load	\$56,000	\$45,6000	\$104,000
% with debt >\$100K	13%	None	46.6%

Doctoral Employment in Psychology, CPWAR 2005

However, the graduate education setting within which students obtain their doctorate may be a primary factor. Rapoport, Kohout, and Wicherski (2000) note that Ph.D. recipients during the period 1993-96 from professional schools of psychology as compared to traditional universities were more likely (41 vs. 15%) to have debt in excess of \$30,000. Given that a majority of Psy.D. program are located within professional schools of psychology, this may in fact be the primary associated factor for debt incurred. Rapoport, Kohout, and Wicherski (2000) also noted that debt in excess of \$30,000 was incurred by 19% of all doctoral recipients in psychology and exceeded rates in all other science and engineering Ph.D. fields. The next closest field was social science at 8%.

The sources of support available to students who are obtaining doctoral degrees in psychology vary by type of career path as well:

Sources of Support	Students Preparing to Provide Health Services	Students Preparing for Research/Other
Loans	36.2%	11.4%
University Research or Teaching Assistantship	25.9%	50.8%
Own Earnings/Family Support	30.0%	21.6%

Doctoral Employment in Psychology, CPWAR 2005

Loans are a primary source of support for students who are planning to engage in health service provision while those preparing for research/other careers are more likely to receive university based support in the form of a research or teaching assistantship.

One caution on the above should be noted. Debt incurred by graduate students cannot be assumed to be entirely related to tuition costs and further data collection is necessary to understand better that issue. For example, some students may choose to take on debt in order to offset living expenses, such as purchasing a car or home, or supporting a family, which others may not have chosen to do. Nonetheless, available data suggest that those earning doctoral degrees in psychology are incurring debt, students preparing for health service provision career are incurring more than those entering research settings, this debt is more likely to be in the form of loans, and greater debt is related to obtaining a Psy.D. and earning a doctorate from a professional school of psychology.

Workforce Analysis in Medicine

The field of medicine, comparable to professional psychology in its structure as a doctoral level health profession, has for years studied the appropriate number of physicians required to be trained to meet societal demand. Other disciplines, including pharmacy and nursing, have also used workforce analyses and concluded that they faced provider shortages. Recently the Association of American Medical Colleges (AAMC) reported that the incoming 2007 medical class is 2.3% larger than that of 2006 (AAMC, 2007). In fact, it has been recommended to increase medical school enrollment by 30% over 2002 levels by the year 2015 (AAMC, 2006). Yet, in the 1980's and 90's a surplus of physicians was predicted and recommendations by the AAMC and others actually were to reduce medical school enrollments (AAMC, 2006). However, there are differences between the regulations and resources that govern medicine and psychology that make the two professions not comparable when it comes to workforce analysis or market place controls.

First, medicine has a long-standing history of conducting workforce analyses to make informed recommendations about the needs for the physician workforce and to use to advocate for federal training funds. In 2004 the AAMC Center for Workforce Studies was created with a stated goal to "Promote a supply and distribution of physicians by specialty and by geographical area that are consistent with the demands and needs of the U.S. population" (AAMC, 2005). These decisions are to be informed by data collected and analyzed by the Center for Workforce Studies. While the workforce analysis that is being conducted by the CPWAR will allow psychology a similar data set with which to inform discussion about the supply and demand for psychologists, there are other differences between the structures of the education and training systems between medicine and psychology that are relevant.

First the history of the current structure of medical education in the United States can be traced back to a report commissioned by the American Medical Association Committee on Medical Education (AMA CME) from the Carnegie Foundation in 1910 and authored by Abraham Flexner (Cooke, Irby, Sullivan and Ludmerer, 2006). This report, commissioned out of concern of the then unstandardized medical education curriculum, recommended an integrated system of didactic education and training combined with research and clinical experience (Cooke, Irby, Sullivan and Ludmerer, 2006). In 1911, Flexner advocated that only those schools that met these standards should be allowed to continue to operate (Beck, 2004). In 1912 a group of licensing boards formed the Federation of State Medical Boards which agreed to follow the academic standards set by the AMA CME in the development of accreditation policies. This decision, then gave the CME the functional power to make workforce and accreditation decisions that would be enforced by law (Beck, 2004) and hence established a structure that is very different from psychology where there is no direct relationship between the policies set by the APA Committee on Accreditation and the laws and rules promulgated by state and provincial licensing boards.

In order to complete residency training and become licensed as physicians in the United States, individuals *must be a graduate of an accredited medical school* (unless they meet foreign eligibility requirements). Medical school accreditation criteria explicitly require that programs demonstrate that they have the financial and structural resources (including faculty) to support the number of students they matriculate. Any increases in an entering class size must have prior approval by the Liaison Committee on Medical Education (LCME), the accrediting body for medical schools. While no class sizes are set by the LCME, the burden is on the school to demonstrate the appropriate ratio of students to faculty.

The American Council for Graduate Medical Education (ACGME) accredits medical and surgical residency training programs in the United States. Accreditation is required for a program to receive graduate medical

education funds from the federal Center for Medicare and Medicaid Services, which provides almost all funding for residency positions. Residency programs must also provide financial support for their residents; this is clear evidence of one of the more tangible benefits of program accreditation. Residents must graduate from ACGME-accredited programs to be eligible to take their [specialty] board certification examinations. In addition, many states require completion of an ACGME-accredited residency program for physician licensure.

Current Issues in Professional Psychology Training

If professional psychology is to attract the best and brightest students, the broader context of current professional psychology must be understood as it relates to the internship match imbalance.

The Costs of Internship Training

As noted earlier, when internship training first became widespread, funding was provided by the VHA and the federal government to support students. NIMH has also historically funded internship slots, as many as 31.3% of all positions in 1974-75 (Tuma & Cerny 31.3%). However, federal support for internships has declined and as Williams and Kohout (1998) point out, the economic structure of internships has dramatically changed. Of the programs they sampled, on average only 7% of the costs associated with running an internship program were derived from sources external to the institution while an average of 14% of the costs were derived from the program and 76% from the institution. Funding derived from patient care revenue was most commonly reported. The median annual cost, at that time, to fund an internship program was \$120,000 (the median number of interns was 4). Further, 59% of this sample reported a decline in revenue in the five years preceding the survey. In addition, most third party payer systems, including Medicare, will not reimburse for services provided by a psychology trainee.

As Kaslow and Keilin (2006) note, internship programs face a balance between offering positions that provide a fair salary and the reality that training is expensive. The average stipend according to the 2007-08 APPIC Internship Directory is \$22,400 for all programs, \$23,600 for APA accredited programs and \$18,800 for non-APA accredited, APPIC member programs. The Fair Labor Standards Act of 2004, which has been applied to interns in some settings, has placed further burdens on sites that must comply with the provisions of this act. For those programs who seek or obtain APA accreditation there is currently a \$2,000 initial application fee, a \$2,000 annual fee, and a \$3,000 fee for a site visit. Membership in APPIC requires a \$250 application fee, a \$400 annual fee and a \$115 match fee.

The Internship Match Imbalance and Hours of Training

A related concern to the internship match imbalance is the perceived impact it has had on the number of hours of practicum training students seeking internships obtain. A steady increase in the number of hours reported by internship applicants has been well documented. Ko and Rodolfa (2005) noted that in the six year period from 1994 to 1999 the average number of practicum hours reported increased from 1469 to 1878. It is widely held that this increase is directly related to students' perception that increased number of hours of training will enhance their "marketability" as an intern applicant. In fact as Kaslow and Keilin (2006) note, some have recommended that the number of hours be capped. Further, a focus on hours per se is inconsistent with current models of education and training that focus on acquisition of competence as the method to measure student learning outcomes (Kaslow & Keilin, 2006; Kaslow, Pate, & Thorn, 2005).

Admissions to Doctoral Programs

Doctoral programs in psychology have seen an increase in both numbers of programs and enrollment rates over the past few decades.

Student Enrollment. The following table provides information about enrollment in doctoral programs as reported for Graduate Study in Psychology. While not all these students are enrolled in professional psychology programs, they do represent a majority of the figures below. For example, in 2005-06 there were 21,358 students enrolled in a clinical or a counseling psychology doctoral program; 3,804 of these were new students.

Number of Doctoral Students Enrolled Full and Part Time, by Year			
Year	Number of Doctoral Students Enrolled	% Increase in Students	Number of Programs Reporting
2005-06	41,286	4.2	1,117
2004-05	39,624	4.9	1,108
2003-04	37,743	5.7	1,111
2002-03	35,695		1,095

Source: Graduate Study in Psychology, 2005 through 2008. Compiled by APA Center for Workforce Analysis and Research

This table indicates that there has been a 15.7% increase in the number of students enrolled in a doctoral program over this four year period.

	Student Enrollment Figures by Year in APA Accredited Doctoral Programs					
	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>
Clinical	16528	15581	15300	19443	19749	20092
Counseling	3144	2846	2514	3107	2938	2995
School	1840	1809	1496	2036	2038	2131
Combined	699	612	606	800	711	755
Total	22208	20848	19916	25386	25436	25973

*source APA Committee on Accreditation Annual Reports for 2001, 2002, 2003, 2004, 2005, 2006 (Draft)

Again, consistent with overall trends in doctoral enrollment, enrollment in APA accredited professional psychology doctoral programs has increased from 2001 to 2006, although that growth has not been continuous.

Enrollment by type of degree reveals the following:

	Student Enrollment by Type of Degree Program in Accredited Programs				
	<u>Ph.D.</u>	<u>% Total</u>	<u>Psy.D.</u>	<u>% Total</u>	<u>Total</u>
Clinical	10141	39.0%	9951	38.3%	20092
Counseling	2831	10.9%	164	0.6%	2995
School	1893	7.3%	238	0.9%	2131
Combined	497	1.9%	258	1.0%	755
Total	15363	59.1%	10611	40.8%	25793

*source Draft 2006 APA Committee on Accreditation Annual Report

Norcross, Kohout, and Wicherski (2005) reported the following taken from the 2005 edition of Graduate Study in Psychology (data are reported for the academic year 2003-04).

	Nonaccredited		Accredited	
	Ph.D. (n=26)	Psy.D. (n=14)	Ph.D. (n=127)	Psy.D. (n=44)
Mean # of Applicants	96.0	64.3	161.0	156.3
Acceptance Rate	.2	.6	.1	.4
Mean No. Students Enrolled	6.8	27.0	9.8	34.9

Totals				
# of Applicants	2,399	772	20,286	6,722
# Applicants Accepted	236	497	1,829	2,656
# New Students Enrolled	169	351	1,217	1,502

Doctoral Programs. The number of APA accredited programs has also increased over the past ten years as noted below.

Number of APA Accredited Programs	Year	
	1996	2006
Clinical Ph.D.	157	172
Clinical Psy.D.	30	59
Total Clinical	187	231
Counseling Ph.D.	68	69
Counseling Psy.D.	1	3
Total Counseling	69	72
School Ph.D.	39	52
School Psy.D.	4	6
Total School	43	58
Combined Ph.D.	7	8
Combined Psy.D.	0	3
Total Combined	7	11
Total	306	372

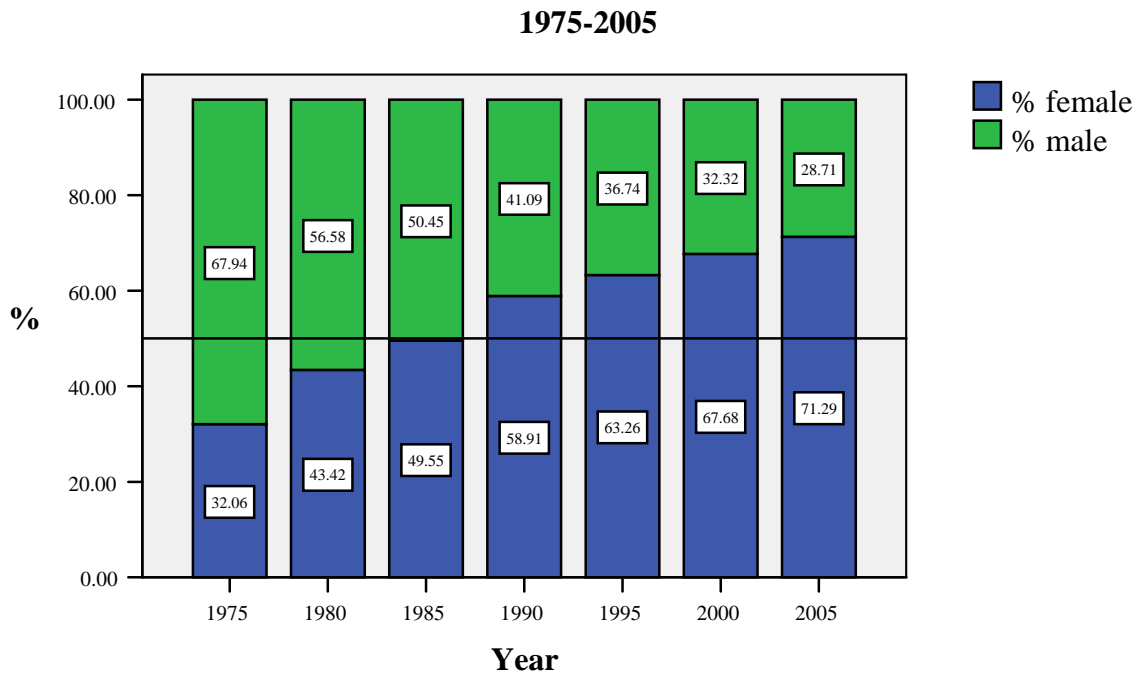
*source Draft 2006 APA Committee on Accreditation Annual Report

Similarly, Oehlert and Lopez (1998) note that there were 224 APA accredited programs in 1986, and 289 in 1998.

Trends in Gender Distribution

Yet another factor related to the professional psychology internship training is the decreasing gender diversity that is occurring as noted below:

Percent of Males vs. Females Earning Psychology Doctoral Degrees



Source: National Center for Education Statistics 2006

Total N (1975) = 2,913; Total N (2005) = 5,106

The increase in psychology doctoral degrees granted to females from 1975 to 2005 is a significant linear trend, $b=1.29$, $p<.01$. The percent of doctoral degrees in psychology being earned by females is increasing at the rate of 1.29%/year. If unchanged, this rate of increase will result in 91% female psychology doctoral recipients by 2020 as compared to 59% for other fields. Specific to professional psychology, information from the draft 2006 APA Accreditation report notes that 76.4% of students in accredited doctoral programs were female as compared to 70.7% in 1996.

The Examination for Professional Practice in Psychology

The Examination for Professional Practice in Psychology (EPPP) is required by all states as part of the licensure process at the independent practice level. States set their own passing score and may require additional documentation and examination before granting a license. The EPPP was created and is maintained by the Association of State and Provincial

Psychology Boards (ASPPB) with the assistance of Professional Examination Service. Data is reported on scores obtained by individuals taking the EPPP by state/province and doctoral program (aggregated by several years). The following data provide some information about the mean scores of students by certain program characteristics. However, the programs represented contain a mixture of APA accredited, those designated by ASPPB/National Register of Health Service Providers in Psychology, and programs that are not recognized by either of these bodies. In addition, these figures represent a mixture of first time and repeat exam takers.

Characteristics of EPPP Candidates August 1, 2006 – July 31, 2007			
	Number of Individuals	Percentage of Total	Mean Score
<u>Type of Doctoral Program:</u>			
Dept. of Psychology	2259	48.35	561.59
Professional School of Psychology (free standing)	897	19.2	524.53
Professional School of Psychology (university affiliated)	836	17.89	534.25
School of Education	540	11.45	553.53
<u>Type of Degree</u>			
Doctorate	4049	86.67	555.43
Ph.D.	2166	46.36	576.73
Ed.D.	23	.49	500.91
Psy.D.	1838	39.34	532.50
<u>APA/CPA Accredited Program</u>			
Yes	3559	76.18	562.34
No	425	9.10	505.47

The number of individuals taking the EPPP has been rising since 2001 as noted below.

<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>
3348	3671	4083	4202	4529

While the figures do not represent only those with doctoral degrees, estimates are that in recent years 15% have been master's level.

Relevant Data

A number and variety of sources of data exist that inform understanding of the internship match imbalance. These sources include periodic surveys, data collected on an annual basis, and data collected to address a specific issue. APA and APPIC are the two organizations collecting the majority of this information.

Within APA the CPWAR has historically collected, and continues to collect, a large amount of information from APA accredited doctoral programs. Prior to the inception of the computerized match by APPIC, the CPWAR engaged in annual surveys of the internship match process which were collaborative efforts with APPIC. In 1999, and corresponding to the advent of the computerized match system, APPIC began to engage in ongoing surveys of both students who had applied for internships and member (internship) programs. In 2007 APPIC extended this to collect information from subscriber (doctoral) programs. Another APA source is the annual report of its Committee on Accreditation that consists of data from APA accredited doctoral and internship programs. One of the few sources of data that also includes non APA accredited doctoral programs is the annual data collected from doctoral programs seeking to be listed among the programs published in the book *Graduate Study in Psychology*. Finally, the CPWAR recently conducted an internship pipeline survey and although only preliminary results are available it provides an overview of the pipeline for internships. More importantly, it will be a piece of the overall workforce analysis the CPWAR is conducting.

The Internship Pipeline

A better understanding of the internship pipeline provides an important context for any discussion of the internship match imbalance. Preliminary results from the Predoctoral Internship Forecast Survey conducted by the CPWAR (October 2007) are presented below:

Estimated Total Number of Students Seeking Doctoral Psychology Internships

	Clinical		Counseling		School		Other		Total	
	N	%	N	%	N	%	N	%	N	%
Estimated total number of students who will seek internships in...										
February 2008	1,035	70.9	293	20.1	64	4.4	68	4.7	1,460	100.0
February 2009	1,059	73.0	253	17.4	68	4.7	71	4.9	1,451	100.0
February 2010	1,043	72.5	252	17.5	72	5.0	71	4.9	1,438	100.0
February 2011	1,054	72.0	257	17.6	67	4.6	85	5.8	1,463	100.0

SOURCE: 2007 Doctoral Internship Forecast Survey. Center for Psychology Workforce Analysis and Research, American Psychological Association, October 2007.

Note. The numbers presented represent projections made by Directors of Training. Percentages are row percentages.

This table reflects responses from 159 out of 373 (42.6%) accredited doctoral programs in psychology. In comparison, information from the annual reports of APA accredited programs indicated that in 2004 there were 3424 students seeking an internship, in 2005 there were 3819, and in 2006, there were 3916.

Of course, the number of students who will re-enter the match in 2008 needs to be considered as well. Estimates from the CPWAR and APPIC are that approximately 37-45% of those students who did not match in the 2007 APPIC match will enroll in the 2008 match.

APPIC Match Survey

APPIC has engaged in a post-match day survey of applicants since the inception of the computerized match process. The most recent data available are from the 2007 match and represent the responses of 72% of the participants in the match (G. Keilin personal communication, October 19, 2007). Initial analyses have identified differential match rates based on specific factors and have identified some inequities in the system. It is also important to note that tests of significance have not been conducted on these data.

Aspects of the doctoral program:

- Students from APA or CPA accredited doctoral programs match at higher rates (80 vs. 64%)
- Match rates by program type: Clinical 79%, Counseling 78%, School 84%, Combined 80%

- Match rates are higher for students from scientist-practitioner programs than scholar-practitioner programs (83% vs. 73%) and higher than practitioner programs (63%).

Individual Factors:

- Rates of matching by number of times entering the match were as follows first time: 80%, n=2451, second time 72%, n=166 and third time 67%, n=12. Of note, in 2006, while there were only five that responded to the survey who were in the match for the third time, they all successfully placed.
- Geographic limitations have been shown to be predictive of poor match rates. Those with no limitations had a match rate of 82% while those with limitations due to family, financial or health considerations matched at a rate of 71%.
- Age appears a factor; match rates drop to 70% in the age group 36-40 as compared to 80% for students 31-35.
- Match rates also vary by number of dependent children (73% for 1 or more vs. 81% for none) and adult dependents (69% 1 or more vs. 80% for none).
- Match rates were not different for applicants who were married or had a partner (80% not married, 79% married/partner).
- While the number of females seeking internships is substantially greater than males, match rates do not appear different based on gender (81% for males, 79% for females).
- Sexual minority students match at comparable rates to heterosexual students (heterosexual 79%, gay male 85%, lesbian 81%, bisexual 78%).
- Students with disabilities matched at a rate of 71%, those not reporting a disability 79%.

Data Specific to Ethnic Minorities

A report from the Committee on Ethnic Minority Recruitment Retention and Training (CEMRRAT2, 2007) cites data from the Department of Education that from 1995/96 to 2003/04 the number of ethnic minority students receiving a doctorate in psychology has increased by 16.6%. Of these, there was a 34.2% increase among Black/African Americans and a 1.7% decrease among Hispanics/Latino/as and a 22% decrease in Whites. Further, data from Graduate Study in Psychology, also cited by CEMRRAT2, shows that from 1997 to 2003 there has been an overall increase of 5.3% in the number of minorities entering Psy.D. programs: this is attributable largely to a 13% increase in Hispanic students.

With respect to internship, data from the 2006 and 2007 APPIC applicant survey show comparable rates of matching among various groups.

		2006	2007
American Indian		78.6% (n=11)	83% (n=30)
Black/AA		80.2% (n=73)	82% (n=174)
Hispanic		89.2% (n=91)	80% (n=183)
White		83.1% (n=1182)	79% (n=2011)

Using the 2007 data, if all students from minority backgrounds are grouped, 21.2% of all unmatched students were minority while data from the recent CPWAR Internship Forecast survey indicate that 21.7% of students of color did not match as compared to 29.2% of students not of color. More recent match results are somewhat different than match rates reported a few years ago and cited in the CEMRRAT2 Task Force report:

APA Survey of Internship Applicants – 1999 vs. 2001 vs. 2003			
	1999 unmatched (n=170)	2001 unmatched (n=113)	2003 unmatched (n=148)
Black/AA	4.1%	5.3%	6.1%
Hispanic	6.5%	4.4%	11.5%
White	80.6%	72.6%	72.3%

However, the relatively low response rates may be a factor.

In sum, recent surveys conducted by both APPIC and the CPWAR do suggest differential match rates can be associated with specific factors. While this is not to suggest that certain student characteristics are undesirable, they do suggest that focused attention specific to needs and experiences of certain types of students should be considered in an effort to eliminate any inequalities that may exist.

Education Directorate Interview of Directors of Training 2007

In 2007 the Education Directorate conducted telephone interviews of a sample of approximately 20 Directors of Training. Programs were chosen to represent a broad sample of type of degree offered, setting, geographical locations and APA accreditation status. Training directors were initially contacted by email and those interested in participating were contacted to schedule a telephone interview. Interviews were generally 20-30 minutes in length following a structured template. The goal was to obtain qualitative

information about perceptions of the internship match by directors of clinical training. Several themes emerged.

When asked about the impact of the internship match imbalance on their program and their students, a number of training directors reported concern about the anxiety their students experienced regarding getting an internship slot and the students' (and some programs') perceptions that obtaining higher numbers of hours of practicum training would make them more competitive applicants. Programs noted this belief led students to be anxious about getting hours and resulted in students not focusing on other aspects of their training in order to complete more hours.

Training directors were asked about their beliefs regarding alternative models of internship training. Many were supportive of captive and half-time internships as they met the needs of students who were unable to relocate for their internship. While many also felt that moving away was not a necessary component of a quality internship experience, many expressed concern that the internship should be in a different setting and with different supervisors than prior practicum training.

When asked specifically about APA's role in the internship match imbalance, several training directors noted that they felt accreditation was too expensive for many internships and that the criteria were too difficult for many programs to meet. While training directors overwhelmingly noted that funding for internship slots was a primary reason more slots did not exist, they had varied opinions about APA's role related to funding. A few thought it would be helpful if APA had direct funding for programs, but some strongly argued that APA should not engage in this. Many supported APA's ongoing advocacy efforts to secure money from the government for education and training.

There was support for APA's efforts toward greater public disclosure through such methods as the new Committee on Accreditation requirements for disclosure by doctoral programs, as well as expressions of feeling hopeful that the workforce analysis would paint a clearer picture of the profession and the need for psychologists. It was noted by several that many solutions would need to be developed to address the imbalance, as it was clearly not a simple situation.

Many training directors expressed concern that the imbalance was created by a combination of new programs and larger class sizes and that internships could not keep pace, given economic barriers to creating more internship slots. While some felt that this imbalance would even out as students became unwilling to enroll in programs with low internship match rates, most felt an active stance on the behalf of the profession was needed.

Finally, when asked about the relative importance of APA accreditation of internships, training directors overwhelmingly affirmed that accreditation was synonymous with quality and was important for students' future success in the job market.

What has been done related to the internship match imbalance

1997 "Supply and Demand" Conference: In addition to the multiple data sets reported above there have been a number of actions taken in response to the internship match imbalance. In 1997 the APA and APPIC co-sponsored "Supply and Demand: Training and Employment Opportunities in Professional Psychology" (Pederson, DePiano, Kaslow, Klepac, Hargrove & Vasquez, 1997). This was intended to be a working conference focused on the supply and demand issues in professional psychology and to develop strategies with the goal of developing action steps that would better prepare psychology students at all levels of training for the changing employment market. The participants passed several resolutions such as a request for greater attention to systematic data collection, gathering more information about students seeking internship, and recommended that APA and APPIC should work together to develop and publicize data sets that are national, regional, and program-specific.

APPIC Initiatives: APPIC has also been a national leader in efforts related to the internship match imbalance. Its efforts have included a successful mentoring program to help prospective internship programs become APPIC member programs, often a first step toward APA accreditation. Further, APPIC has been a leader in making publicly available data through its website on outcomes related to the match. This includes annual information about the match in general such as the number of applicants, number of students, numbers matched and numbers who did not match. In 2006 it published match rates by program, aggregated over a five year period in their website. Further, it has conducted since 1999 annual surveys of students who participated in the match, which have provided information about the nature and characteristics of students who do and do not match.

Public Disclosure: A major focus at APA has been promoting policy and practices that increase public disclosure of information for students enrolled in and considering graduate study. Of particular significance, the Committee on Accreditation in 2007 passed a policy that accredited doctoral programs must make publicly available data including match rates for their students, program costs, and time to completion. Further, several years ago programs submitting information for publication in Graduate Study in Psychology were asked to provide details on match rates for students in their programs seeking internships in the year prior. As noted previously, major data sets within APA exist such as those collected by the CPWAR, data collected for the publication Graduate Study in Psychology, and through the annual reports programs submit to the Committee on Accreditation. Data from surveys conducted by the CPWAR are posted at <http://research.apa.org/> and are frequently presented at national meetings.

Advocating for Additional Training Dollars: The Education Directorate through its Office of Government Relations is involved in ongoing efforts to advocate for federal funding for psychology education and training and has had several noteworthy successes. The Graduate Psychology Education (GPE) program, first funded in 2002, resulted in \$1.8 million being awarded to 18 programs in 2007. The GPE program is the only source of direct funding for internship stipends. The Center for Deployment Psychology (CDP) was established in FY 2006 to better prepare for unmet mental and behavioral health needs of returning service members and their families by providing training to both military and civilian psychologists. The CDP received funding in the amount of \$3.4 million in 2006 and \$2.9 million in 2007. All satellites for the CDP are located in APA accredited internships. In addition, funding has been obtained for the Garrett Lee Smith Memorial Act (GLSMA) programs, which are housed at SAMHSA. Specifically the APA's Education GRO office was instrumental in developing the idea for the Campus Suicide Prevention initiative. This program has awarded 55 grants to date to institutions of higher education to increase awareness about suicide and depression. The Substance Abuse & Mental Health Services Administration (SAMHSA) Reauthorization is underway and APA is advocating for an expansion of the CMHS workforce efforts, including a loan repayment program and support for students of the eligible mental health professions in accredited graduate programs and internships. The GRO Offices in both the Education and Practice Directorates are currently working together to explore opportunities to expand psychology funding through the Centers for Medicare and Medicaid Services.

APAGS: The Association of Psychology Graduate Students (APAGS) has been very involved in disseminating information to students through its website, its monthly publication GradPsych, and through many workshops and discussion hours offered mainly at the APA convention.

Scholarly Review: Finally, the new APA journal Training and Education in Professional Psychology (TEPP) will soon be publishing a special issue related to the internship match imbalance. Articles were authored by professional psychology education and training councils as well as APAGS, APPIC, and one from APA describing workforce analysis and how that might bring better understanding of the internship match imbalance.

Discussion

The history of the professional psychology internship match imbalance is long standing. While the expansion and standard practice of the internship first arose to meet societal needs for trained providers, in more recent decades, funding sources for internship programs have decreased while the number of students entering the pipeline has increased. This report has identified several co-occurring trends in professional psychology education and training, suggesting that the internship match imbalance may be yet one symptom of a larger problem.

First, the large numbers of students who seek internship training outside of the APPIC match system and the quality oversight mechanism that is provided by APA accreditation and APPIC membership raise questions about mechanisms to determine quality internship training and competence.

Secondly, student variables have impact on the imbalance; it is clear that some students are disadvantaged in the APPIC match process by virtue of individual characteristics such as willingness to relocate. Students are obtaining increasingly more hours of training for its perceived market value. Larger issues in professional psychology education and training include the increasing debt load, decreasing gender diversity and time to entry into the profession.

Third, program issues including the costs of operating an internship training program are not insignificant, and largely not captured through fee for service mechanisms.

Fourth, workforce trends: While admissions trends reveal an ever increasing number of professional psychology students, data are lacking to understand what are the societal needs for a psychology workforce and in what types of employment sectors, established and/or emerging.

Fifth, these discussions must consider the various publics or constituent groups involved. These include the students and future students, doctoral and internship programs, regulatory boards, health care reimbursement systems, the federal government, and consumers of psychological services. Each of these groups has a stake and a role in the imbalance and actions targeted to one group will have corollary effects on others. Any actions must also be measured by the political and legal environments that exist.

Finally, how will professional psychology address these issues such that the best and brightest are attracted to the profession in the future?

Efforts to address the internship match imbalance thus far have had limited impact as they have selectively addressed pieces of the problem or limited questions without considering how this will impact the larger context of education, training, and the workforce pipeline. The challenge at this time is to resist the lure of simple questions and simple answers and actually examine this imbalance as the complex issue that it is.

Implications for APA Policy and Initiatives

The internship match imbalance is relevant to several existing APA policies and initiatives that bear consideration as the pathways are discussed. These include policies on accreditation, the sequence of education and training, the model license act, workforce analysis, and membership. Current APA initiatives include advocacy, delineation and measurement of professional competencies, transparency, and psychology's roles as part of the healthcare workforce.

Potential Pathways

Short-term, mid-term, and long-term issues and needs: Potential pathways by which the issues highlighted in this report might be addressed should consider what actions are best taken now, later, and in the long-term future. There are short-term issues to be acknowledged such as the high number of students that are predicted to enter the 2008 APPIC match for the second time, the climate of anxiety that has arisen for students seeking an internship and the dramatic rise in practicum hours as a perceived mechanism to be more competitive in the process. Further, students in large numbers are finding and creating internships that fall outside established quality assurance mechanisms thus calling into question the value of the training they are receiving. Beyond the short-term there are mid-term needs to consider such as how to keep the match imbalance from getting worse, and finally long-term needs such as what actions might reduce/eliminate the imbalance all together.

Three overarching issues frame this discussion:

1. Quality internship training programs and competence of those being trained

Students have been, and are, increasingly creating/locating internships that are not APA accredited, nor even APPIC member programs. In some cases, doctoral programs knowingly alter their requirements for internship training to allow students to enter into these informally arranged internships. The following are questions that should be raised in response to the issue of quality in internship training:

- How can quality be promoted and the competence of students be assessed as they complete a doctoral internship?
- What is the value of APA accreditation of internships?
- Is a two-tiered model developing in terms of quality assurance of internship training?

- What is the role/responsibility of the professional psychology doctoral programs as relate to the internship?
- Is the sequence of education and training in professional psychology still relevant?
- Should alternative internship models be explored in a systematic manner? What exemplar practices or programs currently exist?

Possible pathways by which these might be answered:

- Comprehensive examination of the role of internship in professional psychology education and training.
- Comprehensive examination of APA policies related to accreditation of both internship and doctoral programs.
- Continued emphasis on competency initiatives specific to defining and measuring entry-level to practice.

2. Collecting, disseminating and utilization of accurate information

While there are a number of relevant data sets that exist that provide useful information about the imbalance, the data contained in them have, to date, been used in a descriptive function. For example, it is common to have information presented in terms of percentages (e.g., students from APA accredited programs matched at X%, while students from nonaccredited programs match at X%). Rarely are tests of statistical significance conducted. Further, qualitative examination of current data clearly suggests that there are interactions among variables that may identify those who are particularly disadvantaged in the internship match process and further may make more apparent how resources/efforts should be targeted to solve these issues.

APPIC is in the process of doing such analyses related to the applicant survey data they collect. Questions that may be answered by these analyses include what factors are, or are not, associated with the finding that geographical limitations consistently relate to poorer match outcomes? The relative impact of student age and number of dependents must be considered in these analyses as well. In other words, some of the imbalance issues, while painful to the students who "do not match," may be isolated problems needing solution rather than a symptom of a completely dysfunctional system. Data collection and analysis are necessary to understand the extent of problems and possible solutions.

Covariates and the "imbalance:" APA has existing data that could be examined or perhaps partnered with the APPIC data sets to enhance our understanding. For example, while geographic limitations are routinely noted

as a factor related to poorer match rates, this has not been explored by region. That is, what is the ratio of internship positions as compared to number of doctoral students seeking internships by geographic region? Are areas with greater numbers of doctoral programs or doctoral students more or less likely to have adequate numbers of internship slots to meet the need? Are there certain parts of the country where the imbalance is more prevalent? What might be the factors at play (e.g., lower health care reimbursement rates)? Another area of study is to look at the interplay of ratio of students to full-time faculty, accreditation status of the doctoral program, overall match rates and match rates to APA accredited internships, and model of training. The following are questions related to data on internship training:

- What should be the priorities and how should this issue be approached?
- How should this information be disseminated?
- Are efforts at transparency having an impact?
- What interorganizational partnerships might be pursued by APA?
- Should APA attempt to provide direct funding for internship training and if so, to whom should these funds be prioritized?
- What is the role of the current social context in which professional psychology students exist?
- What is the differential impact of the status quo on substantive areas/specialties and future developed practice areas?
- How can technology be used to enhance availability of quality supervision?

Pathways to consider:

- Enhanced data gathering and analysis related to individual differences.
- Transparency/truth in advertising by promoting dissemination of accurate and up-to-date information.
- Increasing financial support for internship training through advocacy.
- Direct support by APA of internship training.

3. The Psychology Workforce

Is this an imbalance or a bottleneck? It is critical to better understand the long-range societal needs for psychological services and psychologists,

including work environments, so that we can adequately prepare our students for the workforce and give them realistic information about the career choices, be they traditional or emerging opportunities, that they are making. As increasing attention is devoted to the future healthcare workforce, psychology must be part of these conversations and be at a level place via the availability of information related to the current and predicted psychology workforce as other healthcare disciplines have done for years.

As cited in Rozensky, Grus, Belar, Nelson, and Kohut (2007), workforce analysis can answer the following questions related to the career pipeline in professional psychology and thus lend data-based answers to inform the discussion of the issues framed above:

General considerations:

1. Provide information about education and careers in psychology in the context of employment settings, opportunities, and developments in the discipline and profession.
2. Join the other health and scientific professions which utilize a formal and funded workforce analysis function within their own associations to inform their fields and the public in the matters described above and, as a result, have robust data that are used to seek funding to support training, practice, science, and the public interest.
3. Collect data in an independent manner rather than relying heavily on external sources for information that either do not concentrate on issues germane to the psychology workforce or have incomplete data that make psychology's analyses of its workforce less than accurate.
4. Inform public policy and its decision-makers on matters related to funding for education and training, for the advancement of science, and for the support of public practice in psychology.
5. Respond in a meaningful and timely way to inquiries from federal and state governments, and their agencies, about workforce needs, capabilities, and projections related to public funding in support of professional education and training, psychological services, and psychological science.
6. Support APA efforts to increase human diversity in all aspects of the psychology pipeline and workforce in the context of demographic changes in society.
7. Provide longitudinal and cross-sectional databases on psychologist activities, salaries, career paths, etc. for use by the APA in strategic planning, membership services, and its public information functions.
8. How balanced is the supply of and demand for psychologists today across sub-fields of psychology, employment sectors, or geographic areas? What are the future projections of such balance and under what sets of assumptions are those projections made?

9. Are there differences in the roles and employment opportunities for psychologists with different graduate degrees and/or from different training models? How balanced are supply and demand in this regard? What trends can be discerned in regard to preferences of students and potential employers for these two types of degree programs?

Graduate Training Issues:

1. How diverse is psychology's workforce and student pipeline in age, gender, and racial/ethnic composition, as well as in career interests? What accounts for this diversity and what are potential implications for the future of the discipline?
2. To what extent are new doctorates in psychology entering the field with large education debts? Do graduates of particular types of programs, sub-fields in psychology, or demographic characteristics differ in educational debt? How is educational debt affecting practitioners and recruitment to the field, and what summary statistics capture this picture (e.g., among students at graduation, length until repayment, monthly payment). How do these debt characteristics compare with other fields?

Internship/Postdoctoral Issues:

1. Is the supply of funded internships and postdoctoral residencies in professional psychology adequate to meet the current and future demand for psychology training?
2. How well matched (e.g., geographically, programmatically, epidemiologically) are options for training in relation to trainees' preferences and the needs for health services to meet service demands and identified needs?

Professional Practice Issues:

1. How good is the match between the competencies of new doctorates and the competency demands of the job market into which they enter within and across sub-fields of professional psychology? Are there indications that this will change over the next decade and, if so, how?
2. What employment demand exists or can be forecasted for individuals with a master's degree in psychology from programs with specified emphases and how does this compare with demand for recipients of master's degrees in other disciplines?
3. How do employment outcomes for master's degree recipients compare with and affect those for doctoral degree recipients in psychology?

What other disciplines influence the employment demand for or professional roles of those with psychology doctorates?

4. Are practicing psychologists losing market share to practitioners in other professions (*e.g.*, physicians, marriage and family therapists, advanced practice nurses, counselors, etc.)? How is this determined? What is the basis of this change and what are its long-term consequences?
5. What is the scope and prevalence of unemployment and under-employment among psychologists? What characterizes those who are unemployed or under-employed? Are there other categories of less than optimal employment condition that need recognition?

Pathways:

Identify priorities and resources to ensure that the workforce analysis yields relevant information.

Recommendations to the Board of Educational Affairs:

The following pathways represent recommendations by the staff of the Education Directorate as vital areas to be discussed by the BEA with examples of potential action steps for consideration:

Short-term

- Advocacy – efforts such as building the grassroots network
- Transparency and efforts to disseminate information – are technological resources adequate, could they be used more effectively
- Students – actions to promote clear information about the APPIC internship match to reduce anxiety and misinformation that might add to the efforts by others such as APAGS and APPIC and the training councils

Mid-term

- Workforce analysis priorities – identify priority areas within the workforce analysis, consider if the priority focus should be on psychology's healthcare workforce as previously recommended by APA task forces on this topic
- Review of quality assurance as reflected in APA accreditation policies – how can quality be promoted and competence in students be enhanced?

Long-term

- Examination of the role of internship training – is it time for a major conference on education and training for the health workforce, with special attention on the role of the internship?

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