

Outcome Study  
of Substance Impaired Physicians  
and Physician Assistants Under Contract  
with North Carolina Physicians  
Health Program  
for the Period 1995-2000

Oswald H. Ganley, PhD, PA-C  
Warren J. Pendergast, MD  
Michael W. Wilkerson, MD  
Daniel E. Mattingly, PA-C

**ABSTRACT.** The objective of this 6-year retroactive chart review is to compare outcome between chemically dependent physicians and physician assistants under contract with the North Carolina Physicians Health Program (NCPHP). Of 233 physicians 91% had a good outcome, compared to only 59% of 34 physician assistants in this sample (significant by Chi-Square method, 99.99% confidence). Fifteen percent of physicians and 37 percent of physician assistants were female with basically the same outcome. Alcohol, followed by opioids, was the predominant substance used by both groups. Most subjects in both groups were be-

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Oswald H. Ganley is Sr. Physician Associate, The Healing Place of Wake County, Raleigh, NC.

Warren J. Pendergast is Medical Director, Michael W. Wilkerson is Medical Director, Talbot Recovery Campus, and Daniel E. Mattingly is Physician Assistant/Field Coordinator, North Carolina Physicians Health Program, Raleigh, NC.

Address correspondence to: Oswald H. Ganley, PhD, PA-C, 408 Estes Drive, Chapel Hill, NC 27514.

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tween the ages of 30 and 55 with best outcome between the ages of 25-29 and the worst in those over 55. With paucity of data on physician assistants in the literature, the present study may be one of the first to single out this group and compare their recovery rates with those of physicians while receiving similar NCPHP services. [Article copies available for a fee from The Haworth Document Delivery Service: 1-800-HAWORTH. E-mail address: <docdelivery@haworthpress.com> Website: <<http://www.HaworthPress.com>> © 2005 by The Haworth Press, Inc. All rights reserved.]

**KEYWORDS.** North Carolina Physicians Health Program, physicians, physician assistants, opioids, alcohol

### INTRODUCTION

The North Carolina Physicians Health Program (NCPHP), aimed at aiding impaired physicians, was formally established in 1988. Legislation in 1993 permitted the North Carolina Academy of Physician Assistants (NCAPA) to enter into a Peer Review Agreement with the North Carolina Medical Board (NCMB), the North Carolina Medical Society and NCPHP. This was implemented in the following year.<sup>1</sup> This legislation provided the statutory authority for establishing a confidential peer review process for physician assistants, to include identification, intervention, treatment referral, monitoring, and advocacy.

NCPHP is available to aid any physician or physician assistant whose health or effectiveness is at risk for impairment by alcohol or other chemical dependency, or behavioral issues. The North Carolina program strives to identify and assist troubled physicians and physician assistants *before* they endanger their patients or themselves. In many cases impairment has progressed and become more serious by the time a clinician enters the program. Referrals come from a variety of sources including the NCMB, hospitals, colleagues, family members, and the practitioners themselves. Practitioners who are impaired and will not voluntarily withdraw from practice for treatment must be reported to the North Carolina Medical Board.

When a practitioner is referred, either NCPHP's Medical Director or Associate Medical Director or both conduct a screening interview at the central office. Based on this initial interview, NCPHP may rule out diagnoses requiring treatment or monitoring, may refer for an in depth four-day assessment at an outside facility experienced in such matters, or may refer the practitioner directly to treatment depending on the individual circumstances.

Issues and problems assessed and monitored by NCPHP include chemical dependence, depression and bipolar disorders, behavioral issues, and sexual boundary violations. It is NCPHP policy that sexual boundary violations with patients must be reported to the Medical Board. However, practitioners with problems other than sexual boundaries may remain anonymous to the Medical Board if they agree to treatment and monitoring such that patients' safety is protected. NCPHP participants sign a multi year monitoring contract the length of which depends on the individual's condition (typically 1-2 years for substance abuse and 5 years for substance dependence). For cases involving chemical dependence, the contracts include random screening for drug use (primarily urine and hair testing), meetings with a volunteer monitor, participation in Alcoholics Anonymous (AA) and other self-help groups, and Caduceus meetings (self-help meetings for medical professionals), and other terms relevant to the individual case.

NCPHP is unique among physician health programs for its extensive use of volunteer monitors to obtain additional random drug screens. These monitors are physicians and physician assistants, substance abuse counselors and others who are specially trained by NCPHP, who also provide peer support and facilitate participants' recovery plans during regular meetings.

This study came about because, despite the similarity of NCPHP services provided to physicians and physician assistants, anecdotal data suggested that there were differences in outcome between the two groups. The study sought to determine if this anecdotal impression was correct. We also wished to determine what variables such as age at entry into the program, gender, substance used, or psychiatric comorbidity might influence the outcome within each group and whether an analysis might explain any possible differences in outcome between the physician and physician assistant groups.

## **METHODS**

This is a 6-year retrospective study, in which charts were examined to determine the outcome of each physician (MD/DO) or physician assistant (PA) who had been under contract with NCPHP at any time between January 01, 1995 and December 31, 2000. The cohort consisted of those under contract for substance abuse or dependence, including participants with psychiatric comorbidity. Participants with psychiatric or other disorders/impairment who did not have a substance use disorder

der were excluded. For purposes of determining compliance, or use/relapse, the observation period was extended forward to include January 1991 through December 2001, to allow inclusion of individuals under contract with NCPHP or other equivalent program, or those who were between contracts during this period.

The outcome of physicians and physician assistants who participated in the NCPHP program was categorized as follows:

- *Good outcome without complications.* This included participants who completed a three or five year contract, or completed one year or more of their contract through December 2001 without incident. Also included here were those who were known to have successfully finished their contract in another state.
- *Good outcome with complications.* This included individuals who used/relapsed while under contract or between contracts, but who eventually completed their three or five year contract, or who had done well for at least one full year after their last relapse through December 2001.
- *Poor outcome.* This included those individuals who did not complete their contract for whatever reason, or who moved out of state and were known to have used/relapsed, and who did not finish their contract.

Physicians and physician assistants with incomplete records, or who moved out of state and were lost to follow up, were excluded from the study.

While the primary aim of this study was to compare the outcome between physicians and physician assistants, the data also lent itself to at least a preliminary examination of such possible variables to the outcome as age at entry into the program, gender, and substance used, as well as the presence of Axis I and II comorbidity. To avoid confusion with psychiatric disorders commonly seen during recovery from substance use disorders, e.g., depression, psychiatric diagnoses were only accepted when made after in-patient assessment by qualified professionals or by the patient's own psychiatrist.

## **RESULTS**

A search of the records for this period using the criteria described above disclosed 258 physicians and 35 physician assistants who had

been followed by NCPHP. Of these, 18 physicians and one physician assistant fell under the exclusion criteria, leaving 233 physicians and 34 physician assistants eligible for analysis. Because our number of physician assistants for inclusion was so small relative to the included physicians, we compared these two groups with their respective groups of licensed providers in North Carolina, and found them to be roughly proportional (see Note 1). Twelve of the 233 physicians (5%), but only one of the 34 physician assistants (3%) carried a diagnosis of substance abuse rather than substance dependence (using criteria from DSM-IV-TR).<sup>2</sup> The physician assistant and all physicians except one with a diagnosis of substance abuse had a “good outcome.” The overwhelming majority of our subjects were substance dependent.

On comparing the outcome of physicians and physician assistants, a total of 151 (65%) of the physicians had a “good outcome,” and a further 60 (26%) had a “good outcome with complications.” Twenty-two (9%) of the physicians had a “poor outcome.” Adding “good” outcome to “good with complications,” the physician participants in this study had an overall successful outcome of 91 percent.

By contrast, of the physician assistants, 17 (50%) had a “good outcome” and three (9%) had a “good outcome with complications.” Fourteen (41%) had a “poor outcome.” “Good” plus “good with complications” added up to a success rate of only 59 percent for physician assistants, compared to a 91 percent success rate for physicians. These differences, except for the “good with complications” category for physician assistants (insufficient numbers,  $n = 3$ ) are significant by the Chi-Square method. Chi-Square Statistic = 26.79818 with 2 degrees of freedom; confidence level 99.99%. These comparisons are summarized in Figure 1.

Among our subjects, 31 of the 233 physicians (15%) were female, while nine of the 34 physician assistants (37%) were female. In the physician assistant group, females appear to have done better than males—77 percent vs. 52 percent (7/9 vs. 13/25) making a successful recovery. However the numbers are too small to draw any real conclusions (Table 1).

Among physicians, there appeared to be little if any difference in outcome whether opioids, alcohol, or stimulants were used. Even polysubstance use made no difference (Table 2). In the physician assistant group, some differences were seen (Table 3), but again the samples were too small to draw any meaningful conclusions. In our sample of physicians, 59/233 (25%) used opioids; 117/233 (50%) used alcohol; and 37/233 (16%) were polysubstance dependent. Miscellaneous substances accounted for the remainder. The physician assistant figures,

FIGURE 1. Comparison Outcome Between Chemically Dependent Physicians and Physician Assistants Under Contract with NCPHP

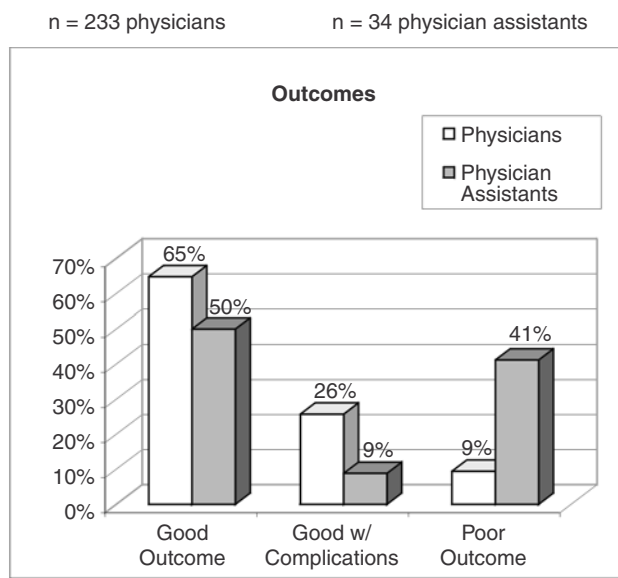


TABLE 1. Outcomes by Gender: Physicians and Physician Assistants

GENDER	DEGREE	TOTAL #	POOR	GOOD	GOOD WITH COMPLICATIONS	SUCCESSFUL OUTCOME*
F	MD†	31	3	22	6	90%
F	PA‡	9	2	7	-	77%
M	MD	202	19	129	54	91%
M	PA	25	12	10	3	52%

\* Adding columns Good plus Good with Complications

† Percent of MDs who are female = 15%

‡ Percent of PAs who are female = 37%

respectively, were 12/34 (35%) and 15/34 (44%), other substances accounting for 19 percent. There were two individuals with polysubstance dependence in this sample. Analyses by substance(s) used are summarized in Tables 2 and 3.

Coexisting, non-substance related, Axis I psychiatric disorders were observed in 42/233 (18%) of physicians and 11/34 (32%) of physician

TABLE 2. Outcome by Substance: Physicians

SUBSTANCE	TOTAL #	POOR	GOOD	GOOD WITH COMPLICATIONS	SUCCESSFUL OUTCOME†
OPIOIDS	59	6	33	20	90%
ALCOHOL	117	11	81	25	91%
POLYSUBSTANCE	37	5	18	14	86%
OTHER*	19	1	16	2	95%

\* Other: barbiturates n = 6; benzo n = 2; cannabis n = 3; stimulants n = 6; cocaine n = 2

† Adding columns Good plus Good with Complications

TABLE 3. Outcome by Substance: Physician Assistants

SUBSTANCE	TOTAL #	POOR	GOOD	GOOD WITH COMPLICATIONS	SUCCESSFUL OUTCOME†
OPIOIDS	12	5	5	2	58%
ALCOHOL	15	8	6	1	46%
OTHER*	7	1	6	-	86%

\* Other: barbiturates n = 1; polysubstance n = 2; cannabis n = 3; stimulants n = 1

† Adding columns Good plus Good with Complications

assistants. For both physicians and physician assistants, depression was the predominant psychiatric disorder. On the other hand, 10/233 (4%) of physicians and none of the physician assistants were diagnosed with an Axis II disorder. It appears that in our sample physician assistants were diagnosed with a comorbid Axis I disorder almost twice as frequently as physicians. The Axis I results are summarized in Table 4.

Our study is not sufficiently powered to determine whether Axis I comorbidity exerted an adverse effect on the outcome, either among the physicians or the physician assistants.

Data were also analyzed for any relationship between age of entry into the program and the eventual outcome. The majority of subjects (84 percent of combined physicians and physician assistants) fell between the ages of 30 and 55 at entry (220/261). Best outcome (100 percent success in 11/11) was seen for those between 25 and 29. The worst outcome was seen for those older than 55 (77 percent successful outcome in 23/30). Eighty-seven percent of those in the in-between group of 30 through 55 years of age had a successful outcome (Tables 5 and 6).

Table 6 summarizes outcomes categorized by age at entry of physicians and physician assistants. In the “poor outcome” group, physicians

TABLE 4. Outcome by Axis I Comorbidity: Physicians and Physician Assistants\*

DISORDER	DEGREE	TOTAL #	POOR	GOOD	GOOD WITH COMPLICATIONS	SUCCESSFUL OUTCOME <sup>‡</sup>
DEPRESSION	MD	28	4	14	10	86%
	PA	8	3	5	-	62%
BIPOLAR	MD	10	2	3	5	80%
	PA	2	1	1	-	50%
OTHER <sup>†</sup>	MD	4	-	2	2	100%
	PA	1	-	1	-	100%

\* Axis I diagnoses: MDs 42/233 = 18%; PAs 11/34 = 32%

<sup>†</sup> MD: Dysthymic n = 2; Anxiety n = 1; Sexual D/O n = 1; PA: Dysthymic n = 1

<sup>‡</sup> Adding columns Good plus Good with Complications

TABLE 5. Outcome by Age at Entry: Physicians and Physician Assistants Combined Data

AGE GROUPS	TOTAL #	POOR	GOOD	GOOD WITH COMPLICATIONS	SUCCESSFUL OUTCOME*
25-29	11	-	11	-	100%
30-39	86	13	55	18	85%
40-55	134	16	80	38	88%
> 55	30	7	19	4	77%

\*Adding columns Good plus Good with Complications

TABLE 6. Outcome by Age at Entry and Degree: Physicians and Physician Assistants

AGE GROUPS	DEGREE	TOTAL #	POOR OUTCOME	GOOD OUTCOME	GOOD WITH COMPLICATIONS	SUCCESSFUL OUTCOME*
25-29	MD	11	-	11	-	100%
30-39	MD	72	6	49	17	92%
30-39	PA	14	7	6	1	50%
40-55	MD	114	9	69	36	92%
40-55	PA	20	7	11	2	65%
> 55	MD	30	7	19	4	76%

\* Adding column Good plus Good with Complications



proved to be a little older than physician assistants, averaging 50 years old (extremes of age being 33 and 76), while physician assistants in this group averaged 41 years old. In our sample there were no physician assistants under age 30 or over age 55. No differences were noted in the other groupings.

### ***DISCUSSION***

For reasons as yet unknown, outcome results for physicians and physician assistants in our small study population differed sharply, with a success rate of 91 percent for physicians and only 59 percent for physician assistants.

The North Carolina Physicians Health Program (NCPHP) strives to provide identical services for physicians and physician assistants. Suspected impaired clinicians referred to, or self-referred to NCPHP are assessed by either the Medical Director or Associate Medical Director, or both. If the case involves a physician assistant, the NCPHP staff PA is also involved in the assessment to ensure true peer review. If warranted, the clinician may be referred for an in-depth four-day assessment at an outside facility experienced in such matters. Based on this in-depth evaluation, the Medical Directors and staff PA then decide that either no further concern is warranted, or that a monitoring contract and some duration of out-patient or in-patient treatment are in order. If the impaired clinician agrees, treatment then progresses either with the knowledge of the North Carolina Medical Board (NCMB) or anonymously, depending on the individual's situation. Monitoring for compliance is done by professional field representatives of NCPHP, who meet monthly on a random basis with participants to perform body fluid (primarily urine screens) and hair specimen testing for drug use, and to discuss participants' participation and progress in recovery, as well as any problems. Participants also meet for discussions and random urine drug screening on a monthly basis with their volunteer peer monitor. Participants are also expected to regularly attend multiple weekly AA or similar meetings, as well as two Caduceus meetings per month. No differences in treatment between the two groups were discernable at this stage.

Concerning relapse cases, things become more murky. While NCPHP has no objective data, anecdotal evidence appears to suggest that while the great majority of physicians elect to go for long-term in-patient treatment after relapse (usually lasting 3 months or longer), few physician assistants avail themselves of this option. Physician assistants have

more often opted for, and been permitted to go to less intensive treatment programs (e.g., several weeks of outpatient treatment or short-term inpatient or residential treatment of approximately 30 days). The main reason conjectured for this state of affairs is the lack of money on the part of the physician assistants. In our series, only three of the 34 physician assistants fell in the category of “good outcome with complications.” That is, once there had been a relapse, the odds for a successful outcome among physician assistants were radically diminished. Other reasons which have been informally suggested for the difference in outcome, such as incentive and motivation (physician assistants have less time and money invested in their training, and therefore do not have as far to fall in terms of their career), economic/social status, age of entry into the profession (most physicians enter medicine right after college, while physician assistants may enter the profession later) are highly speculative.

One other possible reason for a difference in outcome between physicians and physician assistants is entry into the program at a different stage of their addictive disease. In other words, physician assistants in the program may be sicker when they first begin to get help, and may do less well as a result. Currently, it is not known whether this is the case, or whether this type of self-selection bias plays a significant role in different outcomes.

The literature has been of little use, since we have been unable to locate any studies singling out physician assistants, while there are a respectable number of published outcome studies on addicted physicians.<sup>3-5</sup>

Other causes for difference in outcome, such as age of entry into the NCPHP program, gender, substance used, and Axis I and II diagnoses, were actually analyzed, but the number of subjects was too small to give anything but directional hints at what may be happening.

An intriguing finding was that nearly a double number of physician assistants had a diagnosis of a comorbid Axis I disorder when compared with physicians, i.e., 32 percent of physician assistants versus 18 percent of physicians. In both groups depression was the predominant psychiatric disorder, followed by bipolar disorders. But while four percent of physicians in the program had a diagnosis on Axis II, none of the physician assistants carried such a diagnosis.

Among physicians, gender made no difference in the final outcome, while among physician assistants, females did somewhat better than their male counterparts.

Alcohol and opioids were the drugs of choice for both physicians and physician assistants. Sixteen percent of physicians were polysubstance

dependent, while only two physician assistants (5%) were addicted to multiple substances.

The majority of both physicians and physician assistants entered the program between the ages of 30 and 55. The best outcome was seen for those between 25 and 29, and the worst for those 55 and over. For those with a “poor outcome,” physician assistants were a little younger, with an average age of 41, versus 50 years old for physicians. No differences were found in other outcome groupings.

Certain limitations must be considered in interpreting the findings of our study. Although covering a period of six years, the number of study subjects was small, including only 233 physicians and 34 physician assistants. A comparison with the numbers of licensed providers with North Carolina addresses in the year 2000, however, showed the numbers of physician assistants and physicians in our study to be roughly proportional to those groups among the licensed providers in the state. The small numbers in our study, and especially the small numbers of physician assistants, makes numerical analysis difficult to interpret. The basic finding of this study, *i.e.*, the difference in outcome between physicians and physician assistants is statistically significant. However, further comparison refinements—differences in numbers of comorbid Axis I disorders, substances used, gender and age—while interesting, are at best only indicative of a need for further study. This study also suffers from the usual defects inherent in retroactive chart reviews, including the inconsistent use of definitions in a number of categories.

Nonetheless, as indicated by the paucity of data on physician assistants in the literature, the present study may be one of the first to single out this group, as well as one of the first to compare physician assistant with physician outcome. We encourage other state Physician Health Programs who deal with both groups of professionals to review and publish their data, and come up with standardized definitions of problems and outcome. This would help to make more definitive studies possible, and thus aid in developing more favorable treatment modalities.

#### NOTE

1. Arbitrarily choosing the year 2000, we found that there were 1,944 physician assistants and 19,895 physicians licensed in North Carolina (North Carolina Medical Board: Personal Communications). Our physician assistant sample thus represented 1.7 percent of the licensed group, and our physician sample represented 1.1 percent.

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