VOLUME I

FINAL REPORT

"CONTINUED ESTABLISHMENT OF A SYSTEM TO EVALUATE THE COMPETENCY OF ASSISTANTS TO PRIMARY CARE PHYSICIANS"

Submitted to

Division of Associated Health Professions
Bureau of Health Professions
Health Resources Administration
Public Health Service
Department of Health and Human Services

under

Contract No. HRA-231-77-0073

September 30, 1980

National Commission on Certification of Physician's Assistants
3384 Peachtree Road, N.E., Suite 560
Atlanta, Georgia 30326

This report is made pursuant to Contract No. HRA-231-77-0073. The amount charged to the Department of Health and Human Services for the work resulting in this report (inclusive of the amounts so charged for any prior reports submitted under this contract) is $304,706.00. The names of the persons employed or retained by the contractor with managerial or professional responsibility for such work or for the content of the report are as follows:

David L. Glazer
Executive Director
NCCPA
Project Director

Henry R. Datelle, Ed.D.
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I. INTRODUCTION

Under the auspices of the Division of Associated Health Professions (DAHP), Bureau of Health Resources Development (now the Bureau of Health Manpower), Health Resources Administration of the Department of Health, Education and Welfare (now the Department of Health and Human Services), and private foundations, and with the endorsement of the physician assistant's (PA's) emerging professional societies, the American Academy of Physician Assistants (AAPA), and the Association of Physician Assistant Programs (APAP), a mechanism to evaluate the competence of the products of PA training programs was developed by the National Board of Medical Examiners (NBME) and first administered in December, 1973. At that time, nurse practitioner, nurse clinician, and child health associate programs were gaining momentum; graduates of these programs were also eligible to take the examination.

It was further decided that the PA National Certifying Examination would be available to informally trained PA's who met certain eligibility criteria determined by a committee of NBME. NBME would also form a Standard Setting Committee to determine pass/fail levels. These were new and uncomfortable roles for NBME whose traditional charge had always been confined to the developing, administering, and scoring of examinations for physicians.

Consequently, NBME and the American Medical Association (AMA), together with representatives of twelve (12) other groups, agreed, in late 1973, to form an independent commission to assure the PA profession, employers, state medical boards, and, most importantly, patients of the competence of this new class of health professionals.

Effective July 1, 1974, the DAHP funded HEW Contract Number NO1 AH 44110, entitled, "To Establish a System to Evaluate the Competency of Assistants to the Primary Care Physician". The contractor was the AMA-Education and Research Foundation (AMA-ERF). Additional support was provided by the Robert Wood Johnson (RWJ) Foundation, effective July 27, 1974.

In pursuit of development of that system, the contractor agreed to form an independent national commission later identified as the National Commission on Certification of Physician's Assistants (NCCPA).

NCCPA officially began operations with the opening of its national office in Atlanta, Georgia in February, 1975. In the subsequent contractual/grant period each of the contractual objectives were accomplished in part or in total. The initial funding period for both the contract and grant was for three years and culminated in a final report.[1]

As was made clear in both the original proposal and the referenced final report, a project as ambitious as NCCPA could not become self-sufficient with three years of funding. Accordingly, and with a three-year track record for the project, NCCPA proposed an additional contract for the "Continued Establishment of a System to Evaluate the Competency of Assistants to the Primary Care Physician". Effective October 1, 1977, NCCPA was funded in the amount of $244,770 for the three-year period ending September 30, 1980, under DHEW Contract Number HRA 231-77-0073; this document is the final report of that project. The funding was for personnel costs and overhead only and represented a percentage of the total NCCPA budget.

[1]To Establish a System to Evaluate the Competency of Assistants to the Primary Care Physician; DHEW Contract NO1 AH 44110; June 30, 1977.

Specifically, this contract required that NCCPA continue development by:

1. maintaining the NCCPA organization as originally chartered;
2. assessing examination, application, certification, and renewal fees;
3. developing a revocation process;
4. administering a proficiency examination for physician's assistants qualification evaluation;
5. establishing eligibility requirements, including a provision for individual eligibility based on criteria other than graduation from a formal program, and processing applications to determine eligibility;
6. establishing pass/fail levels;
7. notifying candidates of results;
8. issuing a certificate to be periodically renewable based on qualifications established by NCCPA;
9. documenting the individual certificates;
10. providing liaison to states;
11. appointing NCCPA representatives to test committees;
12. continue developing a formal plan for recertification.

NCCPA has continued to perform its functions as reported after the first three-year contract when NCCPA was a project of AMA-ERF.

In addition to the above tasks, the most notable innovations that have occurred during the current contractual period are:

1. modification of the clinical examination component (see Section II.D);
2. introduction of a performance feedback mechanism (see Section II.D);
3. modification of eligibility criteria for informally trained candidates (see Section II.D);
4. performance of examination equating studies (see Section II.E);
5. formation of a recertification plan (see Section II.K);
6. development and pilot investigation of a proficiency examination for physician's assistants in surgery (see Section II.L.1);
7. automation of the examination and reregistration process (see Section II.L.2).

This final report will emphasize new information, problems and/or activities that have occurred during the current contractual period. Those aspects of NCCPA that have remained unchanged will be described briefly with reference to the appropriate section of the final report covering the first three years of NCCPA operation.

II. SPECIFIC NCCPA ACTIVITIES

A. NCCPA Organization

NCCPA continues to represent a broad spectrum of interest beyond that of the PA profession. It is a separate and freestanding certifying body. As reported in Section II.(A) of the first final report, the NCCPA Board of Directors is composed of 21 individuals representing 14 different organizations. In addition to three directors-at-large representing the public, AAPA provides 5 directors to NCCPA. The remaining 13 organiaztions each provide one director to the Board. The NCCPA representative organizations and the current directors are shown in Appendix 1. Participation by each director and representative organization is voluntary. Attendance at the semi-annual Board meeting is always nearly 100%, even though directors receive no remuneration except for expenses.

Most of NCCPA policy continues to derive from committee recommendations with ultimate Board approval. NCCPA committees address issues, alternatives, and potential solutions and make recommendations for consideration by the Board of Directors. The NCCPA Board reviews committee recommendations and establishes policy on the basis of consideration of the committee reports. The 11 currently existing committees, members, and their specific charges are listed in Appendix 2. The only new committee to be formed during this contractual period is the AAPA/APAP/NCCPA Liaison Committee. Because of some communication and perceptual problems that have arisen between NCCPA and some of the profession's leadership (see Section III.C), NCCPA encouraged the establishing of a committee which could surface and discuss areas of concern in a forum less formal than the NCCPA Board of Directors meeting. The committee is composed of four representatives from each organization, has met four times in the past 15 months, and is alternately hosted by each organization. After an initial period of becoming comfortable and open with the process, the Liaison Committee has begun to serve a valuable purpose in, on the one hand, informing the profession about NCCPA activities, decisions, and their reasons, and, on the other, expressing the profession's concerns about NCCPA activities.

The unique organization of NCCPA has permitted 14 diverse health organizations to work cooperatively toward a single goal. This organizational structure has worked effectively over the entire six years of NCCPA operations. The Board of Directors meets twice annually in the Spring and Fall. The Executive Committee meets four times per year. Committees convene as necessary, but, generally, semi-annually. This frequency assures that directors and committee members are constantly informed of NCCPA activity and that they formulate Commission policy in a timely manner.

B. Assessment of Fees

As required by the contract, NCCPA was to assess application, examination, certification, and renewal fees. Each of these have been assessed and altered when necessary, and are discussed below:

1. Application and Examination Fees: The DAHP and foundations carried the initial three-year lion's share financial burden of developing the PA examination (1973, 1974, 1975). Actual cost to the candidate represented less than one-third of the total per capita expenditure. It was felt that the initial examination development costs should not be borne by the PA's and, moreover, that total responsibility for the examination by the profession should only occur when the examination had been proved to be a reliable measure of competence and when a sufficient number of "pool" questions had been developed. The examination has proven to be extraordinarily reliable, and the financial

burden of continued evolution, administration, and scoring is now supported by candidate fees.

Beginning with the 1976 examination, NCCPA assumed total financial responsibility for the examination, which was to be paid for by the assessment of examination fees. Because of the availability of a question pool, NCCPA was able to significantly reduce the number and size of test committees, and, therefore, the total examination developmental cost. Nonetheless, as reported in the final report of the first contract, the additional cost to be borne by candidates was $74,500. To offset this increase in 1976, NCCPA increased the per capita examination fee from $60.00 to $115.00. Even with this increase, NCCPA continued to carry a portion of the burden of the cost beyond that covered by candidate examination fees. In 1978, it was necessary again to increase examination fees to $135.00. This increase was required due to three factors:

a. the pervasive and unanticipated effects of inflation;
b. the unanticipated necessity to perform involved statistical investigations of reported examination administration irregularities (see Section III.A);
c. the failure to reregister certified PA's to the extent originally estimated (see Section III.B.3).

The review of applications and ancillary material is a time-consuming process. Since the examination fee is a per capita reflection of the NCCPA costs under the NBME subcontract, an application fee must be charged to partially cover review expenses. The non-refundable application fee, as recommended by the NCCPA Finance Committee and approved by the Board of Directors, is $65.00. Thus, the total current cost to the applicant is $200.00. In the event that a candidate is deemed ineligible or notifies NCCPA of inability to sit for the exam 60 days or earlier prior to the test date, the entire examination fee of $135.00 is refunded. Beyond 60 days, the refund is prorated.

2. Certification Fees: Except for the initial 1973/74 Physician Assistant-Certified (PA-C) population as reported in the referenced final report, no certification fees have been assessed by NCCPA.

3. Renewal Fees: NCCPA continues to reregister the certificate based on evidence of acquisition of 100 hours of CME accredited and logged by AAPA. The fee schedule continues as reported in the referenced final report. As per that schedule which was originally developed in 1973, the reregistration fee will be raised to $50.00 every two years beginning in June, 1981.

NCCPA has also developed a program for "recertifying" the competence of PA's through examination, to be initiated in 1981 (see Section II.K). The initial step in the process will be the taking of the written portion (MCQ and PMP) of the current year's entry-level examination. Candidates for recertification must have a current (reregistered) certificate. The NCCPA Board has established a combined application and examination fee of $165.00 for recertification.

C. Revocation Process

The issue of certificate withdrawal remains a difficult legal problem for NCCPA. Fortunately, to date, NCCPA knows of no PA-C whose right to practice has been withdrawn.

NCCPA has been apprised of some fraudulent use of the PA-C certificate and has acted accordingly. In one case, an individual fraudulently obtained a copy of another person's exam report from NCCPA and represented it as his own. NCCPA informed the individual by certified letter from legal counsel to cease and desist, and cancelled the fraudulently used NCCPA identification number, issued the correct person a new number and certificate, and so notified all state enabling agencies. Through investigation, NCCPA also determined that the rightful certificant was in no way involved in the fraud. NCCPA has since tightened security so that this particular incident cannot recur.

In a second incident, NCCPA was informed of another individual who was representing himself fraudulently as a PA-C. Appropriate steps were taken to inform the State Medical Board of the fraud. The individual was also contacted and has ceased misrepresenting his NCCPA status insofar as can be determined.

NCCPA has published the news release shown in Appendix 3 in hopes of deterring any further potential misrepresentation.

D. Examination Eligibility, Development, and Administration

NCCPA has continued to administer the entry-level examination as originally described in the referenced final report. The current eligibility routes are shown below and described in the brochure in Appendix 4 (which also includes a new but substantively unchanged application form):

1. graduation from an accredited PA program;
2. graduation from a family or pediatric nurse practitioner program at least four months in duration and affiliated with an accredited school of nursing or medicine;
3. informal training for four out of the five years immediately preceding the examination; experience must be as a PA in the U.S. or uniformed services of the U.S. as verified by present and, where applicable, previous physician supervisors.

There are two changes in eligibility criteria from the previous final report:

1. since programs are no longer funded unless accredited, it is superfluous to admit candidates from federally funded but unaccredited PA programs;
2. the eligibility criteria for informally trained candidates no longer requires that experience be in a primary care setting. NCCPA has continued difficulty in assessing eligibility of informally trained candidates based on work setting, since many PA's provide primary care in specialty practices. After several years experience with the employment verification form (Appendix 5), the NCCPA Eligibility Committee decided that that survey indeed describes a "primary care PA", and that the setting in which those services are provided is incidental to the role. This change has increased the precision and objectivity of the application process and has opened the examination to a few more people who are legitimately functioning as primary care PA's in specialty settings.

Table 1 shows the distribution of candidates for each year by eligibility criteria from 1975 through 1979 (data from 1973 and 1974 are not available).

Appendix 6 of the referenced final report provided a detailed processing manual depicting specific agency/individual application responsibilities and described the NCCPA application review procedures. The systematic process assures that the application and supporting data, including employment verification forms for those rejected are reviewed

separately by at least four different reviewers. The Executive Director reviews the material submitted by each applicant who is deemed ineligible. Since taking responsibility for the registration process (1975), NCCPA has reviewed a total of 10,564 applications through the 1980 examination. Of these, 483 people have been classified as ineligible due to one or more of the following reasons:

- They were not functioning as PA's
- They were not functioning in primary care (now a defunct criterion)
- They graduated from an unapproved program (either PA or nurse practitioner)

The examination performance characteristics of different populations is also of interest. Table 2 depicts the performance profile for 1974 through 1979 examinations (1980 examination performance data are not yet available). Of the people who took the examinations, 8,094 passed and have been subsequently certified as PA-C's by NCCPA. Eighty-three percent of the formally trained candidates (i.e.; PA, Medex, Nurse Practitioner) passed the examination, while thirty-two percent of the informally trained candidates passed. The total failure rate for both formally and informally trained people retaking the examination was sixty-four percent.

Table 3 depicts exam performance data on repeaters. Two indications that a certifying examination successfully measures competence are that; (1) people who fail once, tend to continue to fail on subsequent examinations, and, (2) assuming that training remains consistent from year to year, performance results are also consistent even though examination items may change.

The PA certifying examination was developed in a unique way. NBME surveyed a large number of PA's and supervising physicians to delineate the PA role. This ultimately resulted in a series of functional task statements which were provided to the various test committees. The functional statements have been periodically modified by the acquisition of new information. Test committees are constantly provided with new information concerning the PA role. In 1979, AAPA completed a study which included a detailed PA role delineation[2], much of which has been incorporated into the NCCPA examination, thus assuring that competency assessment remains relevant to PA practice.

The examination developed, scored, and analyzed by the NBME continues to have three composite sections:

1. Multiple Choice Questions (MCQ);
2. Patient Management Problems; separated into "Data Gathering" and "Management and Therapy" (PMP);
3. Clinical Skills Portion (CSP);

The Performance Assessment Skills (PAS) described in the referenced final report was designed to identify those people who did not possess the most rudimentary skills and knowledge necessary to perform a physical examination. The PAS required each candidate to perform a physical examination of the heart, lungs, and abdomen, as well as a fundoscopic and neural examination. After three years experience with the PAS, it became clear that the device was no longer discriminating. Since the PAS was replicated each year, it was possible that programs had begun to inadvertantly teach to the device.

In 1978, the PAS evolved into the Clinical Skills Portion (CSP) component, which presents historical and pathological data to candidates and requires them to perform

[2]The Development of Standards to Ensure the Competency of Physician Assistants; "Volume II; Role Delineation for the Physician Assistant"; DHEW Contract No. HRA-231-76-0053; August, 1979.

TABLE 2

EXAMINATION PERFORMANCE BY ELIGIBILITY CRITERIA

TOTAL EXAMINEES

	Number	Pass/Fail Score Level	Failure Rate	Number Failed	PA-C's
'73	880	400	12.5%	110	770
'74	1,303	420	16.4%	214	1,089
'75	1,411	420	20.0%	282	1,129
'76	1,615	420	20.4%	329	1,286
'77	1,639	420	20.9%	350	1,289
'78	1,649	410	22.6%	394	1,255
'79	1,665	410	21.9%	389	1,276

PHYSICIAN'S ASSISTANTS

	Number	% of Total	Failure Rate	Number Failed	PA-C's
'73	583	61%	13.0%	70	468
'74	922	71%	10.3%	95	827
'75	1,028	73%	14.2%	147	881
'76	1,274	79%	14.1%	180	1,094
'77	1,271	78%	16.4%	213	1,058
'78	1,427	86%	18.5%	279	1,148
'79	1,400	84%	17.0%	257	1,143

INFORMALLY TRAINED

	Number	% of Total	Failure Rate	Number Failed	PA-C's
'73	X	X	X	X	X
'74	116	9%	44.5%	52	64
'75	151	11%	60.5%	92	59
'76	119	7%	68.1%	81	38
'77	101	6%	68.3%	69	32
'78	122	7%	76.2%	96	26
'79	132	8%	74.2%	100	32

MEDEX

	Number	% of Total	Failure Rate	Number Failed	PA-C's
'73	265	30%	12.5%	33	232
'74	196	15%	28.1%	55	141
'75	152	11%	23.8%	37	115
'76	152	9%	40.8%	62	90
'77	163	10%	25.8%	43	120
'78	X	X	X	X	X
'79	X	X	X	X	X

NURSE PRACTITIONERS

	Number	% of Total	Failure Rate	Number Failed	PA-C's
'73	77	9%	9.0%	7	70
'74	69	5%	17.4%	12	57
'75	80	6%	7.5%	6	74
'76	70	5%	10.0%	7	63
'77	72	4%	16.7%	14	58
'78	88	5%	12.5%	13	75
'79	105	6%	12.4%	16	89

SURGEON'S ASSISTANTS

	Number	% of Total	Failure Rate	Number Failed	PA-C's
'73	X	X	X	X	X
'74	X	X	X	X	X
'75	X	X	X	X	X
'76	X	X	X	X	X
'77	32	2%	34.4%	11	21
'78	12	1%	50.0%	7	5
'79	28	2%	50.0%	14	14

TABLE 3

REPEATER EXAMINATION PERFORMANCE

TOTAL REPEATERS

	Number	% of Total	Failure Rate	Number Failed	PA-C's
'73					
'74	38	3%	26.3%	10	28
'75	107	8%	68.2%	73	34
'76	162	10%	63.6%	103	59
'77	192	12%	65.1%	125	67
'78	222	13%	58.5%	130	92
'79	227	14%	59.5%	138	89

PHYSICIAN'S ASSISTANT REPEATERS

	Number	% of Total	Failure Rate	Number Failed	PA-C's
'73	- NOT AVAILABLE -				
'74	- NOT AVAILABLE -				
'75	- NOT AVAILABLE -				
'76	- NOT AVAILABLE -				
'77	120	7%	63%	76	44
'78	180	11%	60%	108	72
'79	183	11%	57%	104	79

INFORMALLY TRAINED REPEATERS

	Number	% of Total	Failure Rate	Number Failed	PA-C's
'73-'76	- NOT AVAILABLE -				
'77	31	2%	81%	25	6
'78	35	2%	54%	19	16
'79	38	2%	82%	31	7

MEDEX REPEATERS

	Number	% of Total	Failure Rate	Number Failed	PA-C's
'73-'76	- NOT AVAILABLE -				
'77	38	2%	58%	22	16
'78	X	X	X	X	X
'79	X	X	X	X	X

NURSE PRACTITIONER REPEATERS

	Number	% of Total	Failure Rate	Number Failed	PA-C's
'73-'76	- NOT AVAILABLE -				
'77	2	.1%	100%	2	0
'78	5	.3%	40%	2	3
'79	3	.2%	33%	1	2

SURGEONS'S ASSISTANT REPEATERS

	Number	% of Total	Failure Rate	Number Failed	PA-C's
'73-'76	- NOT AVAILABLE -				
'77	1	.06%	0%	0	1
'78	2	.1%	50%	1	1
'79	3	.2%	67%	2	1

appropriate physical examinations. The CSP continues to impose significant logistic and cost burdens on NCCPA. Nonetheless, it has proven an extremely reliable and statistically sound device which clearly measures a different aspect of behavior than either the MCQ or PMP components.

Examination reliability is calculated using the Coefficient Alpha technique. The NCCPA examination has proven to be one of the most reliable examinations yet, developed by NBME and within the health field in general. As can be seen from the table in Appendix 6, overall examination reliability is consistently above the .90 level. Reliability data are presented to the Standard Setting Committee members. As long as the reliability coefficient remains high, the Committee can set pass/fail levels with confidence.

Beginning with the 1977 examination, NCCPA and NBME developed the "Key Word Feedback" construction for the MCQ component. Specific key word descriptors are assigned to each MCQ item and a report of missed items is provided to each candidate. Appendix 7 illustrates a representative report.

E. Pass/Fail Establishment

The NCCPA examination is a norm-referenced examination. The philosophy of standard setting is to identify that point at which minimal competency is reached. The Standard Setting Committee is provided with statistical data concerning both the current and previous examinations (see Appendix 6). In addition to P values (measures of difficulty) and R values (measures of discrimination) for both current and previous years, graphic presentations for each of the sections (e.g.; MCQ, PMP, and each clinical skill problem) are provided to the Committee. Additionally, results of equating studies, which compare examinations from year to year using the Rasch Model, are also provided to the Standard Setting Committee. Results of equating studies indicate that the MCQ portion of the examination is of equal difficulty from year to year in comparison with the test populations. Each of the tabular and graphic presentations are explained to the Standard Setting Committee by the psychometric representatives from the National Board of Medical Examiners.

Over the years, the distribution of scores has remained extraordinarily consistent. Each of the portions of the examination correlate positively with each other, but at a low enough level to assure that each portion measures a different aspect of knowledge and skill. The cut-off point continues to be a fairly obvious one. The composite score is composed of two-fifths MCQ, one-fifth PMP (data gathering), one-fifth PMP (management and therapy), and one-fifth CSP.

Beginning with the 1977 examination, candidates who exceeded the passing composite score of the total examination, but failed to perform above acceptable levels on the CSP part of the examination were also failed. The CSP measures the most rudimentary psychomotor activities necessary to perform a physical examination. It is clear from the CSP data that those who know the material do extremely well on the examination, while those who do not know the material clearly do very poorly. The CSP is not designed to measure clinical competence, but rather to separate out those people who have such poor clinical skills that they are unable to perform the most fundamental tasks, irrespective of their performance on written examinations.

There is also the statistical fact that people who perform well on one portion of the examination tend to perform well on all parts of the examination. The converse is also true. Very few people (a total of 31 over two years) have failed solely on the basis of the CSP. Most people who fail perform poorly on at least two portions of the examination.

The Standard Setting Committee is composed of people who have a demonstrated capability in the interpretation of statistical concepts involved in evaluating examination performance and setting standards. Each of the Test Committee Chairmen also sits on this Committee. NBME has a large and eminently qualified staff of psychometricians who advise the Standard Setting Committee concerning interpretation of test data and ultimate setting of pass/fail levels.

The Standard Setting Committee makes use of mean scores and measures of dispersion when setting a passing score. It is important to know the variability of scores, particularly in given sections. The Standard Setting Committee does not, however, set scores to assure that people below certain levels fail the examination. Information concerning measures of central tendency and measures of dispersion are provided to evaluate the consistency of the examination. For example, the CSP portion of the examination possesses many of the attributes of a criterion referenced examination. Mean performance is very high and each year the spread around that mean tends to decrease. This is certainly valuable information for the Standard Setting Committee in order to compare examinations from year to year.

Nonetheless, because this is an examination referenced to a norm group (PA program graduate first-takers), and standardized, and because performance has remained so consistent from year to year, the pass level has remained around one standard deviation below the mean.

F. Examinee Notification

NCCPA continues to notify candidates within twelve weeks following examination administration, allowing sufficient time for scoring, key validation, standard setting, and certificate printing. The only change in notification from the first contract period is in the key word feedback mechanism described in Section II.D. above and the newly designed certificate shown in Appendix 8.

G. Certificate Renewal

NCCPA automatically issues a certificate to each successful examination candidate. The certificate has an expiration date representing 2 years from the June 1st of the year immediately following the examination.

Reregistration remains contingent upon the completion of 100 hours of approved Continuing Medical Education (CME). The CME is accredited and approved by AAPA. A PA need not be a member of AAPA to utilize that agency's resources in the logging and accreditation of CME. There has been a great deal of cooperation between AAPA and NCCPA which has culminated in a clearly defined schedule and set of procedures for certificate reregistration, as depicted in Appendix 11 of the referenced final report.

In spite of this cooperation, NCCPA has nct been able to capture as many reregistrants as originally anticipated. One possible solution under consideration is for NCCPA to also log CME as an alternative to AAPA for those who so choose.

The first certificate reregistration occurred in 1977, and to date, NCCPA has received reregistration applications from 4,139 of the 5,268 PA-C's eligible. The certificate shown in Appendix 9 is awarded to successful reregistrants.

H. Certificate Documentation

NCCPA continues to print an annual Directory of PA-C's. The Directory, organized alphabetically and by state, is mailed automatically and free to state medical boards,

NCCPA Directors, training program directors, and state PA societies. Additional copies are available at NCCPA cost.

Beginning in 1980/81, the Directory will be printed in the Spring to include new entry level certificants and late reregistrants. Additionally, a computer printed update will be provided to state medical boards every Fall to include the current year reregistrants.

NCCPA also provides specific notification by certificant signed authorization to a number of states. This has imposed an increasing workload on staff. Attempts are underway to produce a computer-derived notification form which will be acceptable to all of the state enabling agencies.

I. State Liaison

In addition to the service described above, NCCPA continues to serve as a resource to state legislation and enabling bodies as concerns NCCPA certification. Since the publication of the last final report, eight states now require that the PA have a "currently valid" NCCPA certificate in order to maintain state certification.

Additionally, many states have begun asking more sophisticated questions about NCCPA's processes. As a result of these inquiries, NCCPA published the document shown in Appendix 10 and mailed it to all 50 state agencies responsible for PA activities.

J. Test Committee Representation

There are three test committees (MCQ, PMP, and CSP) which are composed of practicing and academic physicians, practicing and academic physician's assistants, and practicing and academic nurse practitioners. Committee membership is determined jointly by NBME and NCCPA and each committee includes a defined NCCPA representative who reports back to the NCCPA Board each Spring. The test committees are shown in Appendix 11.

K. Recertification Planning

Valid assessment of continued competence of individual health care professionals is a common goal of many governmental and independent certifying/licensing agencies. Currently, a diversity of approaches exists in spite of an absence of clear standards or demonstrations of validity. Moreover, the non-systematic approach to the measurement of continued competence is expensive, and adds to the cost of health care.

NCCPA has developed an ambitious program designed to systematically compare the efficacy and cost of several recertification approaches across a controlled population. The results will provide a basis for development of a set of standards for the measurement of continued competence applicable to all health professions relative to both candidate characteristics and community/practice settings.

The proposed project will take three years to accomplish. The strategy of the project will be to identify and compile current promising approaches to continued competence assurance, administer a highly reliable competency examination (the NCCPA entry level examination) to the entire PA-C population scheduled for recertification each year (1981 = 1,700 PA-C's; 1982 - 1,200 PA-C's; 1983 - 1,200 PA-C's), administer other alternative recertification mechanisms to an appropriately stratified sample of 400 PA-C's each year, and compare the various devices relative to pertinent characteristics of the sample of PA-C's with special emphasis on cost and efficacy of the devices.

The project will be separated into the following five specific activities:

Activity I - Review of Recertification Approaches of Other Agencies
Activity II - Identification of the Sample Population
Activity III - Administration of Alternate Recertification Devices
Activity IV - Comparison of Alternate Recertification Devices
Activity V - Conclusions and Impact of Cost and Efficacy on the Development of Standards for the Assessment of Continued Competence

The first and second activities will occur concurrently and will be completed in the first six months of the project. Activities III and IV will occur over the entire three-year project life.

NCCPA will begin the project by administering the 1980 entry level examination in the Spring of 1981 to the population scheduled for recertification. In the absence of validation of the entry level examination for measuring continued competence, NCCPA feels that the setting of standards for the recertification administration of the entry level examination requires different considerations. Where a clearly defined, norm-referenced pass/fail score can be set for entry level, such a precise score is not nearly as defensible for a continued competence measurement device since neither the format nor the content of the device are unassailably representative of competence in the diverse work settings.

This problem is magnified when the recertification program has a potential foundation in state law; where loss of professional certification may be equivalent to loss of "right to work". Moreover, for a recertification program to work, it must be acceptable to the profession; a device that threatens one's livelihood without prior validation rarely meets this condition.

If the major goal of recertification is to assure continued competence, then it is mandatory to develop devices that help the practitioner identify and rectify individual weaknesses, and that separate only the demonstrably incompetent practitioners. The major intent is not to remove competent people whose skills and/or knowledge may have deteriorated, but, rather, to give as many practitioners as possible the opportunity to identify and repair weaknesses and return to the system with some level of confidence in their proficiency. Thus, minimum standards of performance will be developed for the initial recertification device only for purposes of examinee feedback. No PA-C's certificate will be withheld during the initial three-year period or until the recertification device(s) ultimately chosen has demonstrated validity for the measurement of continued competence of all candidate practitioners regardless of practice setting.

In order to recertify the maximum number of people with sufficient confidence that all those recertified are minimally competent, feedback of results will be provided. For each of the test items, "key words" (see Section II.D) will be assigned. Candidates will be apprised of individual key word deficiencies so that relevant study to correct deficiencies can be undertaken. The key word deficiencies can also be grouped and analyzed for trends and possibly provide indices for new test items, direction for development of subsequent measurement devices, and subject areas for future CME offerings.

L. Other Activities

In addition to those items described in the previous sections, NCCPA has performed other significant activities. These are discussed below:

1. Specialty PA's: The dilemma confronting specialty PA's not eligible for the NCCPA examination and the NCCPA history in this area was detailed in the

referenced final report. During the current contractual period, NCCPA continued to investigate its responsibility to specialty PA's. NCCPA's position concerning specialty PA's was detailed in the position paper shown in Appendix 12. NCCPA has accepted the responsibility for the certification of all PA's regardless of their specialty training provided that appropriate participating organizations requested such development and funding could be arranged to support such processes.

The major goal of NCCPA continues to be the development of a generic core examination which all PA's would have to pass, and supplemented with additional specialty examinations in areas of PA concentration, including primary care and surgery.

As a result of the proposal shown in Appendix 13, the American College of Surgeons funded a pilot test of a Surgeon's Assistant (SA) proficiency examination during the current contract. The results of this examination, administered to both SA's and primary care PA's, suggested the need for an add-on examination in surgery to supplement the National Certifying Examination. Accordingly, an examination and application processing system were developed for administration concurrent with the 1980 Primary Care Examination to be administered in October, 1980. All candidates must pass the Primary Care Examination before they can obtain results on the SA examination. Both new graduates and PA-C's with valid certificates are eligible for the Special Proficiency Examination in Surgery. Appendix 14 provides the various registration materials while Appendix 15 details the NCCPA application review process.

Recently, NCCPA became aware of a supposed National Certifying Exam for orthopedic PA's. NCCPA began reviewing inquiries from state boards of medical examiners regarding this exam and the Commission's involvement with its development. NCCPA proceeded to notify each state of its lack of involvement in this examination by mailing the memo shown in Appendix 16. NCCPA has also begun a dialogue with the Orthopedic PA Board to determine any mutual interest in establishing a liaison.

2. Data Management: Another problem area detailed in the referenced final report concerned the rapidly growing data which NCCPA must process as a function of certification, annually increasing reregistration, and ultimate recertification. These problems were further mitigated by the addition of the SA examination. It was pointed out that continued manual processing would soon be impossible. Moreover, it was clear that in spite of the collection of personal and experiential data pertinent to examination development, NCCPA did not possess the resources to store and retrieve the data.

As a result of an unsolicited proposal, the Division of Medicine of DHEW funded NCCPA to develop a data management system.[3] In order to develop such a system, which would permit the maintenance of longitudinal information, it was necessary to begin the process at application receipt. Consequently, as an ancillary but essential aspect of the data management project, NCCPA developed and implemented an automatic application processing system and acquired appropriate hardware. The system has allowed NCCPA to continue to function without

[3] Development of a Data Analysis System on Eligible Applicants for Certification and the Certified Population of Physician's Assistants; DHEW No. HRD 231-77-0086; 1 November 1978.

additional personnel. NCCPA has developed a detailed manual for the review process which includes the various forms utilized. The manual is available on request.

3. National Commission on Health Certifying Agencies (NCHCA): From the early days of the NCHCA Steering Committee, NCCPA staff and officers have been active in the formation of this agency charged with developing and implementing standards for certifying agencies in the health field. In addition to participation on various NCHCA committees, the NCCPA delegate, Thomas E. Piemme, M.D., was elected as the first president of NCHCA at its Constitutional Convention in December of 1978.

NCHCA has developed such stringent criteria for membership that only a handful of certifying agencies currently qualify for full, unconditional membership. NCCPA was the first agency to be awarded this distinction.

III. PROBLEMS ENCOUNTERED AND SOLUTIONS

During the current contractual period, NCCPA has encountered three specific and generically quite different problems: examination irregularities, financial stability, and the relationship with the profession.

A. Examination Irregularities

Over the past six years of examination administration, and particularly in the last three years, NCCPA has received an increasing number of reports of irregularities in the examination administration. These have ranged from reports of bias or inappropriate behavior on the part of the CSP examiners to reports of examination accessibility to candidates prior to the examination. Each report is thoroughly investigated for statistical corroboration. Such investigations, if not preplanned, are expensive to implement because of the need to expeditiously develop appropriate computer programs and do the necessary analyses prior to convening the Standard Setting Committee meeting. In each case, where reported irregularities have required the development of analytical programs, the programs have been incorporated into the analytical scheme for subsequent years.

In addition to these reports, NCCPA has been confronted on occasion with candidates requesting special dispensation because of handicap, such as wheel chair confinement or reading disabilities. In each case, NCCPA, with the assistance of the proctor and/or CSP coordinator, has been able to accomodate these unusual requests.

B. Financial Stability

The most serious problem that has continued to confront NCCPA is its financial viability. NCCPA has made significant efforts to contain costs, but the question of whether the self-imposed standards of excellence can be continued with an annual population of only 1,650 examinees remains unanswered, particularly in the face of spiraling inflation.

Several things contribute to NCCPA's financial dilemma. The more significant items/activities are detailed below and also discussed in the letter in Appendix 17. The request detailed in that letter resulted in a contract increase in the amount requested.

1. Irregularities: As pointed out in Section III.A. above, NCCPA must be prepared to support statistical investigations of reported examination irregularities. But, when unanticipated reports develop, it is expensive to implement appropriate statistical investigations. For example, a national item by item comparison, if necessitated, could cost $30,000 or more to accomplish. Nonetheless, NCCPA must be prepared to take whatever steps are necessary to ensure the security and equity of its examination and examining process.

2. Examination Development: The NCCPA examination is expensive. It is composed of three parts, and, because the components demonstrate no statistically significant correlations, they are all considered necessary and integral parts of the evaluation of PA competence. Notably, the CSP component adds significant cost to examination administration, because of the need to secure and pay for outside examiners, space, patients, etc.

Moreover, since NCCPA relies on physicians and nurse practitioners (both academic and practicing), as well as PA's for test construction, the cost of convening test committees is expensive, particularly with increasing travel costs.

NCCPA has investigated ways to contain or reduce examination development costs. NCCPA staff has assumed increasing examination registration, preparation, and reporting activities from NBME to the extent that all candidate and test site contact is now accomplished by NCCPA.

Staff has also investigated the possibility of terminating the NBME contract and assuming in-house responsibility for the entire certification process. Analysis has demonstrated that, with an annual test population of less than 4 - 5,000, it is more economical to utilize a test agency, given the intricacies of the NCCPA examination. Moreover, acceptance of the examination at the state level has been and continues to be greatly facilitated by the NBME involvement, since it is generally the medical board that is responsible for implementing PA rules and regulations in most states.

NCCPA and NBME will soon execute a new contract, which provides that NCCPA assume direct responsibility for both test committee and proctor reimbursement. The contract also provides that NCCPA owns all of the test items.

3. Reregistration: As outlined in the proposal for the current contract, NCCPA expected to reregister a large portion of the certified population. NCCPA has not realized these expectations. As shown in the letter in Appendix 17, NCCPA has reregistered to date 4,565 of an originally estimated 6,300 eligible PA-C's for a capture rate of 72%. This represents a $62,940 reduction in expected income.

The reasons for the attrition are not readily apparent, but probably reflect a combination of factors such as: cost (for CME attendance, logging and reregistration), apathy, natural professional attrition, etc. Other factors include the fact that a "currently valid NCCPA certificate" is only required in eight states and that NCCPA mandates that logging be performed by AAPA. In the latter situation, NCCPA is considering offering CME logging as an alternative to utilizing the AAPA in hopes of attracting at least some of the PA-C's back into the system.

4. Other Costs: Spiraling inflation has had an enormous impact on the NCCPA budget. Because both the NCCPA Board and committees include a majority of representatives of organizations that have an interest in, rather than an involvement with, the PA profession, NCCPA continues to support all travel expenses. Staff and committee travel has been reduced dramatically. In the case of committees, agendas are reviewed and, where possible, conference calls are used.

Over the past 5 years, staff travel has been minimized. In its early days, NCCPA staff, notably in the persons of the Executive and Assistant Directors, were responsive to requests for presentations from state boards, legislatures, and various PA groups. In the case of state agencies, requests are now reviewed very carefully to assure that NCCPA presence is likely to have an impact. Visits to state PA societies and training

programs have been largely curtailed unless the invitation includes a commitment to reimburse a significant portion of the NCCPA expenses. Additionally, in the interest of cost containment, NCCPA eliminated the publication of a newsletter. NCCPA has relied on correspondence and the AAPA to keep the profession informed. In retrospect, as explained in the following section, these may have been ill-advised economies.

Next to the NBME contract, NCCPA's major expense item has been the personnel budget. As of the writing of this final report, NCCPA continues to operate with the same number of staff as five years ago. Moreover, of the seven staff members, six have been with NCCPA virtually since the first NCCPA examination responsibility in 1976. Such staff dedication and tenure has been a significant reason for the success of NCCPA. Staff salary increases, however, have not kept pace with inflation, and, consequently, some of the salaries are no longer competitive with similar positions in the Atlanta area. If expertise is to be retained, NCCPA must have a financial growth plan to adequately compensate personnel.

Vendor supplied services have also increased in both cost and utilization. NCCPA is dealing with a continually growing population that now numbers nearly 12,000 PA's. Postage, printing, telephone, and similar other outside services are beginning to rise significantly as a result of inflation. Add to this the increase in utilization, and it is clear that budget adjustments are required. While stringent cost controls and the growing assumption of examination responsibilities by NCCPA have helped contain costs, it has become clear that any agency with one source of income, candidate fees, is severely restricted in the quality and extent of services it can provide, particularly if it wishes to minimize fee increases. In fact, in the interest of restraining fee increases, NCCPA has continued to function from a deficit position, and some essential activities go unperformed, most notably comparisons of examination results to experiential and personal characteristics of the examination population.

Three solutions to the dilemma have been identified: increased candidate fees, diversification of services resulting in more capital, and a charge levied to states. Now that an automatic accounting system has been implemented, NCCPA is in the process of developing a functional analysis of costs and services. The outcome of this analysis will be a clearly defined estimate of what it costs NCCPA to provide each specific service in the certification system (e.g.; entry level examination, reregistration, SA examination, recertification, etc.), and an appropriate adjustment in the fee schedule that assures that each service provided is self-supporting. The danger in such an adjustment is that one activity may contribute disproportionately to NCCPA expense and the associated fee may be prohibitive.

The concept of diversification began with the development of the SA examination. Other potential sources of income include the possible development of an evaluation scheme in clinical pharmacology and therapeutics, for both PA's and other health practitioners, as well as the awarding of research and development contracts/grants to continually monitor and improve the NCCPA certification process. A caveat to all of these potentials, however, is the recognition that continually increasing numbers of PA-C's have already begun to overload the NCCPA staff. Significant workload increases carry with them the promise of increased costs for personnel, space, equipment, supplies, etc.

NCCPA has continued to work closely with many states, particularly in verifying individual PA-C certification status. Each of these states has its own form and procedure for verification, imposing a substantial work burden on NCCPA staff. NCCPA is in the process of developing a universal computer generated verification form for statewide use. The marketing of this form, plus the concept of states recognizing NCCPA's process of certificate renewal may ultimately allow the assessment of a fee to the states for which NCCPA provides service.

The NCCPA Board of Directors and staff are keenly aware of the financial dilemma, and are taking positive and creative steps to ultimately eliminate the deficit. The goal is to perform those unanticipated but essential studies mentioned in Section III.A. It is a long process to become financially secure, and the vagaries of unstable inflation rates make long range plans tenuous. Nonetheless, NCCPA is confident of its continued success and viability as an independent certifying body.

C. Relationship with the Profession

As indicated in the previous section, NCCPA has reduced the extent of direct communication with the practicing PA and has relied on the AAPA and their NCCPA Directors to convey NCCPA deliberations and decisions to the profession. It has become clear over the past 15 months that such economies, in fact, have quite deleterious effects on the relationship between the profession and its separate certifying activity. Because NCCPA functions in the public's, rather than the profession's interest, NCCPA has at times been accused of being non-responsive to PA's. Because the concept of an independent certifying body is innovative and unfamiliar to the profession, many PA's continue to believe that the certifying process should respond to all mandates from the profession. While, as discussed in the previous section, the price of independence is high, the very fact that the diverse NCCPA Board sometimes views conditions differently than the profession is ample justification for continued independence. It is, however, imperative that NCCPA resume direct communication to assure that the profession is aware of its participation in the deliberative process, that costs are clarified, and that positive aspects of NCCPA are accentuated. It is, indeed, the suspicion of many NCCPA Directors that the profession's current discomfort with NCCPA is largely based on false perceptions and inaccurate and/or incomplete communication.

Much of the current problems culminated in an open letter from the AAPA House of Delegates to NCCPA. That letter, which reflected a concern about NCCPA's responsiveness to the PA profession, focused on specific concerns such as: NCCPA's recertification plans, examination eligibility requirements, specialty PA examinations, and perceived fiscal mismanagement. Appendix 18 shows the NCCPA response to that open letter.

In the interest of improving communications, a joint liaison committee consisting of four representatives each from AAPA, APAP, and NCCPA has been formed and is working positively to combat some of the misconceptions held by the profession and to assist NCCPA in promoting more regular communications with PA's.

In the final analysis, the current problems between the profession and NCCPA are not only being resolved, but it appears they have provided a catalyst to improve the interface between the PA population and NCCPA.

IV. BUSINESS AND FINANCE

During the past three years, NCCPA has accomplished all of its contractual obligations, in spite of the prevailing financial dilemma described in the previous section.

Some of the budget categories estimated in the referenced proposal have been exceeded, but, with the exception of those items discussed in the previous section (i.e.; travel, examination development/administration, and irregularity investigation), those overruns have been supported by fees and outside funding specifically designated. During the contractual period, as noted in Section II, NCCPA received funds under DHEW Contract Number HRD 231-77-0086 to develop a data management system, and from the American College of Surgeons to perform a pilot investigation of the need for and feasibility of a special proficiency examination in surgery. Additionally, the costs for ultimate administration of the surgery examination in FY 81 will be supported by candidate fees collected during the current fiscal year.

As noted in the letter in Appendix 17, NCCPA fee income was diverted from the personnel category to support the other unanticipated expenses, necessitating a request for additional funds. Federal direct funds derived from the current contract were used only to support personnel costs, which were held within 5% of the estimates in the proposal. The actual Federal direct contribution to the personnel budget was $185,797.00 ($149,250 from the original contract, plus an additional $36,547 as per Appendix 17). This represented approximately 36% of the total NCCPA personnel expenditure, including fringe.