Guest Editorial
A Conversation with the Richmonds on Their 30 Years of Service with the American Board of Cardiovascular Perfusion

David A. Palmer, EdD, CCP,* Linda B. Mongero, BS, CCP†

*BioTronics, Jefferson Regional Medical Center, Pittsburgh, Pennsylvania; and †Clinical Perfusion, New York Presbyterian Hospital, New York, New York

Abstract: Beth A. Richmond, PhD, and Mark G. Richmond, EdD, Co-Executive Directors serving for the ABCP, have assumed this role for the past 30 years. Their experience working with a variety of perfusionists in the field influenced the profession and some of the professionals we view as perfusion leaders. Anyone with time working as a clinical perfusionist acknowledges the role they have had establishing the certification process and influencing perfusion education. The goal of this article is simply to highlight the Board’s history through the words of both Co-Directors. Our profession, young in years, has a unique history. The names have not been changed and many of the stories have yet to be told. During the winter of 2009, we sat down with Beth and Mark Richmond to talk about their experience working with different Boards over the past 30 years. The following article is their story in their words. Keywords: certified clinical perfusionist, perfusion education, certification, recertification, criterion-referenced, norm-referenced.

QUESTION 1

Perfusionists young and old know of Hattiesburg, MI, because of our yearly responsibility in sending cases and reports to that mailing address. You are the husband and wife team that has been involved with the American Board since 1980. How did both of you first get involved with perfusion and the certification process? What do you remember about those early days as the Board formed and the certification process first started?

Response

We were not involved in the initial development of the Board. After AmSECT established certification in 1972 and the ABCP was first incorporated in 1975, it was another 5 years before we became involved with certification. In 1979, Earl Lawrence was elected as ABCP president to replace Charles Reed who had resigned as president. Earl Lawrence and the directors of the ABCP were faced with the dilemma of finding a new national office and new examination consultants with limited financial resources. To this end, one of the directors of the ABCP, Jerry Richmond, suggested that his brother, Mark Richmond, EdD, a college professor with expertise in statistics and test development, might be interested in working with the ABCP on test development. After discussions between Earl and Mark, the decision was made to move the National Office to Hattiesburg, MS, where Mark Richmond worked as a professor at the University of Southern Mississippi.

Mark Richmond associated a colleague, Beth Arnold, PhD, who brought extensive knowledge of evaluation and test interpretation to the mix. Throughout the remainder of this discussion, the tandem of Richmond and Arnold (later to become Richmond) will be referred to with the use of plural pronouns.

In the beginning, we thought that we were negotiating a test development contract with the Board during our first discussions and subsequent meetings. Somewhere along the way we were told that the national office of the ABCP, at that time housed in the Texas Heart Institute, had to be relocated. Initially, we declined the offer to manage the full operations of the ABCP, because we were both used as full-time faculty at the University of Southern Mississippi and William Carey College. A stronger request was made by the
board to relocate the office to Hattiesburg, MS, and be managed under our co-direction. After seeing that the ABCP was in what appeared to be desperate straits, we agreed to attempt to manage the office and to do test development. The first contract dated to begin on January 1, 1980 was signed in New Orleans in December of 1979. The contract called for the housing of the office in Mark’s one bedroom apartment with a half-time secretary. At the time, there were \( \sim 600 \) certified perfusionists. Obviously, money was scarce. The contract called for payment of Mark’s rent ($289.00/mo) plus the salary of the secretary. Checks were written and sent to the ABCP secretary/treasurer for signature. To this day, we are not sure why we accepted this challenge.

Then the records came. We were told that the files had to be removed from Texas Heart Institute post haste. We received the files in 5' × 3' × 3' cardboard boxes. The files had been literally dumped into the boxes. Fortunately, Sue Brown, CCP, the former Executive Secretary of the ABCP, was willing to come to Hattiesburg and help set us up and organize the files. She was also a perfusionist and an instructor at the THI School of Perfusion. We discovered that they had developed a superior file structure and filing system, which relieved us considerably. The ID numbering system is still in place.

**QUESTION 2**

AmSECT had adopted certain requirements for certification and recertification and had also established minimum standards for cardiovascular perfusion education programs. The ABCP adopted all criteria previously established by AmSECT. Since that time, the ABCP has made some alterations in these standards as they became appropriate. What were the early standards and criteria for perfusion education?

**Response**

The first ABCP certification examination was administered by AmSECT in July 1972 and conducted again in 1973 and 1974 by AmSECT on a grandfather basis. In 1974, the examination was given for the first time on a pass-fail basis. In those years, the oral examination was administered 1 day before the written examination, with candidates being required to pass both the written and oral examinations. If the candidate was not successful in either examination, he/she was required to retake the complete examination. For acceptance into the certification process, a perfusionist had to document current employment in clinical cardiovascular perfusion, 6 months of experience, and 50 independent clinical perfusions performed after completion of training. “On the Job Trained” perfusionists (OJT’s) had to document 2 years of independent clinical perfusion experience and 100 independent clinical perfusions performed after completion of training. The fee for both examinations was $40.00. In 1978, the written examination was given first, followed by the oral examination at a later date and site with the same requirements for admission. When the national office moved to Hattiesburg, there were no initial changes in admission requirements for the examinations.

Although we were impressed with the examinations that had been developed by the ABCP, we felt that it was important to document validity and reliability for the examinations. To that end, we used statisticians from the university to assist us in establishing a technical manual based on American Psychological Association (APA) examination standards. Bill Horgan was president at that time and felt that it was important to follow through on all of the recommendations. At this time, a test–retest reliability was conducted at the San Diego meeting. Examinees were given the opportunity to take the written examination two separate times at this meeting. The first test was given at the beginning of the AACP meeting with the retest administered at the end of the meeting. Statistical comparisons of the results were made to evaluate the reliability of the examinations. A review of the oral examination was also conducted during that period.

Beginning in 1981, there was a major change in admission requirements for the certification process; for the first time, candidates must have graduated from an accredited perfusion training program or have been admitted to the examination process before April 15, 1981. Also, candidates were required to document 50 cases while in training. This was a controversial change that was made to further the profession by requiring formal education rather than on-the-job training for certified perfusionists.

There were few other changes to certification until 1984 when the requirement was made that applicants who had taken and failed the written examination three times were required to document additional perfusion training received in an accredited school of perfusion, and the
training must have been received since the time of the last failure to be eligible to take the written examination; if an OJT candidate was in the process, to stay in the process, he/she was required to take the examination once a year until passed; on receipt of application, candidates were notified that the examination must be taken within 1 year of graduation or application date, whichever is the later date. The fee was now $250.00 for both examinations.

In 1988, there were no changes in basic entry requirements; however, applicants who had taken and failed the written examination three times were required to document additional education from any accredited institution of higher learning in the subtest areas in which the candidate scored below the 30th percentile. In the case that the candidate scored below the 30th percentile in Perfusion Techniques, the candidate was required to receive additional training from an accredited school of perfusion, and such training must have been received since the time of the last failure to be eligible to take the written examination. The candidate was then allowed one additional opportunity to take and pass the examination. Also, beginning in 1988, foreign applicants had to meet the same requirements as all other candidates or their certificates would not be valid in the United States or Canada. This meant that foreign candidates must graduate from an accredited perfusion program to be eligible for certification.

In 1996, a major change was made in the examination process, with the written examination being converted to a criterion-based examination, entitled the Perfusion Basic Science Examination (PBSE), and the oral examination being converted to a written, scenario-based, criterion-referenced examination entitled the Clinical Applications in Perfusion Examination (CAPE). The oral examination was given for the last time in Dallas, TX, in 1996 and the new Clinical Applications in Perfusion Examination was field-tested. Candidates were allowed to take either/or both the oral examination and the new CAPE, which was being field-tested. Although there was no change in basic entry requirements, the number of times that the certification examinations could be taken was no longer limited, and a specific course of remediation after three time failures was no longer required.

By 1997, the examinations were uncoupled, allowing for both examinations to be taken at the same site, provided all requirements were met for the PBSE and the CAPE and the candidate had performed 50 independent cases after graduation. In 1998, the first fall examinations were given allowing both or either examination to be taken at the same site twice a year.

Very few additional changes were made until 2007, when the examinations were converted to computer-based examinations administered in Prometric computer centers throughout the country. This allowed examinees to take the examinations close to home in secure computer centers.

All of the changes through the years were the result of hours of careful thought, research, and debate by the Directors and Officers of the ABCP, with input from practicing CCPs through numerous surveys, forums, and discussions. No decisions were made lightly and without concern for the profession. It is our belief that the Board will continue to make changes to the certification, recertification, and education processes in the future based on the same careful consideration of the changing technologies and needs of the profession.

QUESTION 3

Who do you remember were the notable figures that influenced certification and perfusion education?

Response

An answer to that question would require the naming and commenting on every director who has served on the Board. To, as fairly as possible, represent the development of certification, recertification, and perfusion education, we will refer to the presidents who led the directors through the rocky periods leading to the building of the foundations of these processes. Please remember, the presidents were leaders, but were, in all cases, leaders of the successive boards that did the work, made the decisions, and shared the responsibility for the outcomes that followed.

The earliest foundations of certification occurred before we were affiliated with the ABCP. Charlie Reed was the first president of the ABCP and resigned on the national office removal from Texas Heart Institute and repositioning in Hattiesburg, MS. At this point, we became involved with the ABCP. This period saw the establishment of a reputable process leading to CCP certification that has remained largely intact from its inception.

Earl Lawrence followed Charlie Reed as president of the ABCP. This period was dramatically marked by a period of negotiation with thoracic surgeons regarding the scope of the ABCP. A period historically referred to as the 1981 deadline marked the viability of the ABCP. The Society for Thoracic Surgery (STS) had questioned the educational standards required for CCP certification. At that time, many surgeons had personally trained perfusionists and felt that, although certification was of some value, the requirement of graduation from a recognized perfusion education program was of no value to them.

A meeting was held between affected parties and after a very strong argument of our position by Earl Lawrence, the requirement was sustained. From that point, perfusion education had a foundation from which to build. As discussed earlier, the ABCP has had a major role in promoting perfusion education and accreditation through the years.

During this period, there was no perfusion education accreditation body. The task of accreditation is to establish
the viability of individual perfusion education programs and to set standards for accrediting those schools. The ABCP served a dual role of certification and accreditation. This arrangement was viewed by all affected parties as a temporary solution to the accreditation process. Bill Horgan followed Earl Lawrence as the third president of the ABCP. Bill Horgan led the Board through the transition away from accreditation responsibility and into a nationally recognized accreditation organization, Commission on Accreditation of Allied Health Education (CAAHEP), which was approved and largely funded by the AMA. The transition was a difficult one. CAHEA wanted to dictate some modifications in the certification process that were unacceptable to the ABCP. Bill Horgan was instrumental in leading the board through those rough passages. Even since his retirement from running his own perfusion company, Bill Horgan is still active in the perfusion accreditation process.

QUESTION 4

What were the most difficult accomplishments?”

Response

Wow. Really, nothing worthwhile comes easy. The first very difficult accomplishment was the 1981 deadline, which required all candidates for certification to have graduated from an accredited perfusion training program. The disagreement with corollary surgeons’ organizations almost led to the dissolution of the ABCP, but as events progressed, the disagreements were overcome, leading to the status of the ABCP today.

Next in difficulty would have been the criterion referencing of the examinations. Many senior perfusionists were not happy to see the demise of the oral examination, but external pressures were far from the greatest part of the difficulty faced by the Board. Task analysis followed by creation of a whole new testing base, scenarios, were extremely arduous, and required tremendous effort from all directors on the Board at that time. Mary Hartley was president at the beginning of these Herculean efforts and Tom Utsey took on the task in midstream. Brian O’Connor and Roy Bolles spent long hours writing the first scenarios followed by long hours of writing and reviewing by all of the other Directors. From a test development point of view, it would be impossible to understate the job done by the Board. We feel justified in saying that this is the one area where we gave instruction and direction to the directors. It was hard, but it was fun.

Other difficulties pale in comparison to these two feats. Online filing for recertification was an intensive struggle and was accompanied by some starts and stalls, but when we associated the right group to lead in the development of the computer programming, efforts proceeded at a pace. There was, of course, the task of computer-basing the examinations. This effort, while very important, was accomplished with minimal disruption. There were certainly other difficulties that occurred during the life of the board, but happily, we can report that internal strife was a minimal consideration and officer succession was never a problem.

QUESTION 5

How did the Board get everyone to accept the concept of certification?

Response

The ABCP has always considered the process of certification and recertification to be a voluntary process, solely dependent on the decision of the individual perfusionist. Although this remains an undergirding of the ABCP, in truth, events have led the credential to be something more than voluntary for many, if not most, practicing perfusionists. First, as the ABCP standards for certification and recertification gained stature in the medical community, hospitals and insurance providers began to require individuals to avail themselves of the CCP. State licensure then became a requirement in many states. Again, because of the stature attained by the CCP, the examinations have become the measurement of choice for all state licensure programs. These requirements have undoubtedly added substantially to the number of those individuals who seek ABCP certification. The Board has, however, not weakened the standard for certification as a CCP throughout this evolutionary process.

QUESTION 6

What professional perfusion organizations were involved with the Board? What influence did they have and what contribution did they make for the Board through the years.

Response

AmSECT, of course, led the way for the establishment of the ABCP. Historically, we have had a close working relationship with that organization. For a number of years, we scheduled our examinations to occur 2 days before and at the same site as the AmSECT annual meeting. This was necessitated because of the need for oral examiners. We were generally able to recruit CCPs to act as examiners because they would be attending the AmSECT meeting.

Likewise, we had the same working relationship with the American Academy of Cardiovascular perfusion (AACP) and in some of the early years held examinations in conjunction with their meetings. Both relationships were very beneficial to the operation of the ABCP and made a cumbersome process possible. Many early CCPs remember the day of the oral examination and the process of examining
as many as 300 perfusionists in 40 hotel rooms throughout a day with changes of examinees every 15 minutes.

Before and after the relinquishing of accreditation responsibilities in 1986, the ABCP has worked closely with perfusion accreditation agencies. ABCP representatives served first on the Joint Review Committee for Perfusion Education (JRC-PE) of the Council on Allied Health Education and Accreditation (CAHEA), and subsequently, in 1991 when the AMA relinquished accreditation activities, ABCP representation continued as the JRC-PE became the Accreditation Committee for Perfusion Education (AC-PE) under the umbrella of the Commission on Accreditation of Allied Health Education Programs (CAAHEP). The ABCP has held continuous representation on these accreditation committees throughout the years, and at every business meeting, the Board discussed and participated in accreditation decision making. Likewise, the ABCP has held representation on the Conjoint Committee on Accreditation of the Canadian Medical Association with the ABCP President, Larry Cavanaugh, being named as the first representative to the Conjoint Committee.

**QUESTION 7**

In 1993, the ABCP made the decision to change from a norm-referenced to a criterion-referenced examination, and in 1996, the first criterion-referenced examination was administered. The Board's tempo changed at that time, and you both had a major influence on that educational change. Who was instrumental implementing that change?

**Response**

The change from norm-referenced and oral examination to criterion-referenced examination was the single most labor-intensive change in the history of the Board. The initial impetus came from perfusion school directors. An obligatory 30% failure rate was perceived by the directors as patently unfair. The directors discussed this at length during business sessions. Ultimately, Mary Hartley, then president of the ABCP, directed us to present pro and con arguments to the directors regarding a potential change. We were initially inclined to favor the traditional, norm-referenced test model. As we read arguments and compared the then current state of development of perfusion education, our view of the correct model began to undergo a shift.

Criterion-referenced testing (CRT) is constructed to measure knowledge and/or performance that have been defined as relevant to the task that is to be measured. The ABCP had a test description in the form of an outline that generally specified the areas to be tested. That outline had never been established through what is known as task analysis as a valid measure of perfusion knowledge. At the inception of CRT for the Board, the first step was to develop a task analysis from which to structure the test. Beginning with the working outline, we solicited syllabi and textbooks for all the courses that all accredited perfusion schools were offering at the time. This information was compiled into a questionnaire that was administered to all CCPs who had 3 or more years of experience who agreed to fill out the questionnaire and return it promptly. They rated each standard or objective or task or whatever else these characteristics might be labeled on two factors: the degree to which this knowledge was relevant to the practice of perfusion and the degree to which this knowledge was used in the practice of perfusion. The two factors are utility and relevancy. Content that was not viewed by practicing perfusionists as adequate in either relevance or utility was not included in the knowledge base.

Once the knowledge base was finalized, existing questions from the ABCP test banks were reviewed for inclusion in the new CRT test bank. The primary criterion was that each accepted item had to be a valid measure of the knowledge base component to which it was to be assigned. Some questions were not included in the test bank because they could be assigned to any section of the knowledge base.

Two final reviews of each item were needed to finalize the CRT item bank. Each item had to be assigned a taxonomy level and a cut-off value. The taxonomy level is assigned to ensure that examinations test levels of higher thinking including knowledge, comprehension, application, analysis, synthesis, and evaluation. Cut-off values were assigned by the directors on the basis of the perceived difficulty and relevance of each item. In this step, a value of from .1 to .9 was assigned to each item. The items were to be judged on the directors’ perception of how this would be answered by a barely acceptable new CCP. To determine the cut-off value for any given test, these values were summed. The sum of all cut-off values was the minimum raw score needed to pass that particular examination. Hence, each examination does have a unique pass/fail point. It is possible that all examinees could pass the examination or that all examinees could fail the examination. No longer would a standard of the bottom 30% of scores fail the test. The ABCP works with great diligence to ensure that the content of the test reflects current perfusion practice and is a fair measure of an individual’s grasp of current knowledge and practice in perfusion. The task analysis is repeated approximately every 5 years, and all items are reviewed for their match.

**QUESTION 8**

The decision was made in 1995 to change the oral examination to a written clinical applications examination. The oral examination changed a few years later replaced with the CAPE. Seasoned perfusionists remember that experience well. What are your recollections of those years.
testing using the oral exam? Who was influential implementing that change?

Response

There were a variety of reasons for considering retirement of the Oral Examination. Among those reasons, two were paramount. First, from a statistical standpoint, the Oral Examination was extremely difficult to justify. There was no way to establish reliability or validity of the exam. It would seem that the exam, administered by CCPs with at least 3 years of experience, would be valid on the face of it. Problematically, there was no evidence that the answers sought by questions were of the same content across examinees. In fact, the whole concept of inter-rater reliability was not capable of being established. Results for examinees under different examiners were often quite disparate. Some examiners felt that the examination should be quite rigorous, whereas others seemed to feel that everyone was an adequate candidate. Furthermore, the correlation between Oral Examinations and Written Examinations was not robust.

The second impetus for scrapping the Oral Examination was one of logistics. The national office had to work with the hotel to rent 40+ contiguous rooms for one night. Some 60–120 examiners had to be secured. Scheduling of rooms, examiners, and examinees had to occur. In short, the logistics associated with the Oral Examination made smooth functioning problematical and was very expensive, not to mention labor intensive.

For some years the efficacy of continuing the Oral Examination had been an annual topic of the business meetings of the Board. No adequate alternative presented itself until President Tom Utsey suggested a criterion-referenced companion to the Perfusion Basic Science Examination.

Tom Utsey had, by this time, taken over the presidential role. He had this epiphany that if CRT was such a great replacement for the Written Examination, surely the same would true for the Oral Examination. We did it! It took several extra meetings and tremendous diligence on the part of virtually every director to consummate this effort.

First, there were no items to screen for inclusion in a CAPE CRT. Second, it seemed redundant to develop a second examination in the same form as the new CRT. Someone, we believe it to have been Tom, came up with an idea for a written CRT based on the model of the Oral Examination Scenarios with questions structured similar to the questions posed on the Oral Examination. Using that information as a jumping-off point, items would be written that would measure specific content in the knowledge base, but would also have to fit into the flow of the scenario of which it was to be a part. This we believed was new ground. We had doubts that the directors could soon complete such a gargantuan task and assumed that the oral examination would continue to be given for some years to come. With numerous extra meetings for test writing, with all directors contributing questions written at home and with a few directors even coming to Hattiesburg for a week to organize, edit, and write scenarios and items, the job was accomplished. Cut-off values and taxonomy values were assigned, and both criterion-referenced examinations were rolled out at the same meeting.

The curtailing of the oral examination has reduced the visibility of the ABCP among active CCPs dramatically. This we consider to be a major loss. Further erosion of the visibility of the Board occurred with the advent of computer-based testing. These two evolutions, although both expedient and necessary, have severely limited to opportunity for the directors of the ABCP to interact with other CCPs at test sessions.

QUESTION 9

Serving as Executive Co-Directors for the Board has a strong educational component. You’re both involved in statistically analyzing questions developed by Board members. The PBSE and the CAPE are reliable and valid measures. Each year the Board updates the new knowledge base. During this process, all items in the banks are scrutinized for content validity, statistical relevance and reliability, and grammatical correctness. You have both had a major influence supporting test development. Is this a good measure of perfusion adequacy?

Response

Each summer for 4 or 5 days, depending on the workload, the directors of the ABCP gather to review the results of the past year’s testing. We, along with Steve Oshrin, who joined our firm in about 1997, lead the review of any questions about which there is any doubt concerning its suitability for inclusion on the examination. The review requires that, most importantly, the directors agree that the content of the item is relevant to the practice of clinical perfusion. Beyond that, the directors assess the item for its currency, and if the item is not deemed to be reflective of current practice, it is removed from the item bank.

After these matters have been decided, a review of statistical analysis of the item ensues. Each item is checked for reliability (point biserial correlation with the item and the total test score), the statistical relevance with the test as a whole (the Rasch outfit statistic is used for this measure), difficulty (when the percentage of examinees getting the item right approaches 30 or less, the item is carefully scrutinized), and cut-off score that was discussed previously. The Ebel procedure is used for this determination.

After these tasks have been completed, newly written items are reviewed for inclusion in the item banks. The
directors must decide the quality, currency, and relevance of each submitted item, vote to accept, and agree on taxonomy and Ebel values. In addition to the foregoing, for the CAPE, each item must be reviewed in relation to the scenario within which it is assigned. Review of the CAPE also requires that item analysis and subtest reliability be assessed and reviewed for each scenario.

There go those lovely summer vacations so enjoyed by the directors. Days often stretch into 10- to 12-hour work days, with further informal discussion continuing into the night. The directors are, and have always been, a group of dedicated, hard-working professionals that we have always found willing to listen to tedious discussions of item and test statistical analysis. As we stated previously, this is the only place that we have a leadership role. I am happy to say that the PBSE and the CAPE are highly reliable (meaning that taking the test multiple times almost always leads to similar results, unless major intervention is undertaken). The examinations are respected by hospitals, insurance providers, and every state within which licensure is required. We feel that the directors, in collaboration with our leadership, have developed and maintain one of the outstanding high stakes examinations currently in use.

**QUESTION 10**

What has changed the most about the profession that has troubled you?

**Response**

We feel that it is incumbent on all CCPs to always consider the two names associated with their credential. Those names, Certified Clinical Perfusionist and The American Board of Cardiovascular Perfusion, are clear statements that CCPs are actively involved in the practice of clinical perfusion. Recertification focuses on those aspects of a perfusionist’s profession. The tests are constructed with these facets in mind. Other, corollary activities related to clinical cardiovascular perfusion are certainly examined and included within the scope of recertification, albeit, the emphasis remains on clinical cardio pulmonary perfusion. Proposed changes to that anchor are troublesome and should be approached with the greatest of caution, because changes to this hallmark are changes to the identity of the CCP.

**QUESTION 11**

Finally, where do you see certification 30 years from now? What advice would you give to new graduates entering the profession now?

**Response**

It would be almost impossible to predict the future of medical care in general and cardiothoracic surgery in particular. Since our introduction to the ABCP, we have always heard perfusionists wonder about medical developments that would make obsolete large parts of their livelihood. Intravenous draino is one term that has always been tossed into conversations on this topic. Off-pump surgery has indeed cut the number of perfusion pump runs in open heart surgery but not to the degree forecast. We think perfusionists as a whole would gladly relinquish those parts of their practice that could be more safely and reliably treated by innovations not yet developed.

The future of perfusion, however, is in capable hands, and with innovation will probably also come the need for different and more uses of perfusion. Over the years to come, we think the scope of practice will be amended to meet evolving needs of medicine. In other words, we believe that there will be a need for perfusion way beyond the current horizon of medical care. With the future in mind, the ABCP will in all likelihood be the organization through those winding roads lying ahead.

“To dream the impossible dream.” The question can have no valid answer, as nobody can even begin to predict where we will be in medicine in 30 years. Certainly there will be unimaginable developments in the treatment of all manners of medically related states. Or, conversely, perhaps we will once again have reverted to the stone ages.

Licensure has had an effect on the number of individuals opting to pursue the CCP credential. We earnestly hope that little or nothing has detracted from its quality or importance.

To new CCPs, we would reiterate what we stated in the last question. Don’t forget who you, as CCPs are, and protect your image. The two key words in this, as previously stated, are Clinical and Cardiovascular. Be aware of changes that might change the scope of your practice, and should the practice of clinical cardiovascular perfusion begin to totter toward obsolescence, do not hesitate to use your particular knowledge and skills where they can best be used.

Thank you for giving us this opportunity to look back and reflect on a wonderful 30 years and counting with that amazing and ever changing group of dedicated people, the Directors of the American Board of Cardiovascular Perfusion.

Beth A. Richmond

Mark G. Richmond