Self – Study Report

Shenandoah University
Division of Physician Assistant Studies
Winchester, VA

February 13, 2009
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Section I: Introduction

In October 2000, Shenandoah University (SU) formally established a Physician Assistant (PA) Program within the Division of Physician Assistant Studies, which is part of the School of Health Professions. The purpose of the program is to prepare physician assistants (PAs) who will be capable of providing comprehensive primary health care with the supervision of a licensed physician. In addition, as masters prepared clinicians, they will advance the profession through leadership development, teaching, enhancement of the knowledge base and critical inquiry.

History

Founded in 1875, today Shenandoah University is located on a 66-acre main campus located in Winchester, Virginia as well as other sites located in Leesburg, Virginia, on the grounds of the Winchester Medical Center and other locations throughout the area. In addition to providing an array of undergraduate programs leading to Bachelor’s Degrees in Arts and Sciences, the University provides professional education and training in a variety of disciplines including health professions, business, education, and the arts. The university’s health professions programs offer educational opportunities leading to master’s degrees in Athletic Training, Nursing, and Occupational Therapy. It also sponsors doctoral level programs in Pharmacy & Physical Therapy. The total University enrollment is approximately 3,300 students.

In October 1999, the SU Board of Trustees identified the development of a master’s level Physician Assistant Program as a goal to be realized prior to 2001. A nationally known external consultant confirmed the favorable climate for the development of a PA Program at Shenandoah University after an on-site review in April, 2000. His summary read in part, “Shenandoah University seems to be an academically sound and progressive university that has the basic capabilities to support the development [of] a physician assistant program. The institution promotes its development and pledges to provide adequate resources to formulate quality training program for physician assistants.” (Simon, May 2000)

In August 2000, a needs assessment and resource survey was conducted by an external consultant and demonstrated a need for the program by area physicians and physician assistants willingness to hire SU physician assistant graduates and a desire by many physicians and physician assistants to assist the program with its educational mission. The Program was formally initiated with the hiring of the Program (Miller) and Medical (Laidlaw) Directors in October 2000. They were responsible for the initial planning and curriculum development. Since then, the PA Program has continued to develop in size and quality, now recognized as one the top PA Programs in the country by U.S. News and World Report [http://grad-schools.usnews.rankingsandreviews.com/grad/pas/search].

The purpose of this self-study report (SSR) is to describe and document the status of the Shenandoah University (SU) Division of Physician Assistant Studies (DPAS) in regard to compliance with the Standards promulgated by the Accreditation Review Commission on Education for the Physician Assistant, Inc. (ARC-PA). In addition, the SSR describes the processes and outcomes for continuous and periodic self-assessment conducted by the SU Division of Physician Assistant Studies.
The Physician Assistant Program and its mission, core values, and goals (Appendix A) are consistent with the Shenandoah University’s Mission Statement. These statements, which provide overall guidance and direction for the Division, are reviewed periodically by the faculty and endorsed by the SUPA Advisory Committee. The most recent faculty review and update was conducted in the Summer of 2008 and approved by the Advisory Committee in October 2008. The Shenandoah University Physician Assistant Graduate Competencies (Appendix B) provides the foundation for the curriculum; is reviewed annually and revisions also approved by the Advisory Committee. At the last review, the faculty incorporated key elements from the “Competencies for the Physician Assistant Profession” document.

The periodic self-assessment process began formally June 11, 2007 with the formation and charges to the sub-committees. These sub-committees met periodically during the self-study period and additional details including minutes will be available to the on-site review team. On February 29, 2008 a Student/Graduate Focus Group was conducted by Dr. R.T. Good, Dean, Global Education and Special Initiatives (summary available on-site). Annually, a one to two-day retreat for the Division faculty and staff is conducted to review program documents and reports, conduct a SWOT analysis, and to update the strategic plan. The last retreat was held on August 18 & 19, 2008. In addition, two half-day meetings were held on December 16 & 18, 2008 to specifically review compliance issues relative to the Standards.

The following individuals were involved formally in the periodic self-study process:

- Didactic Phase Sub-Committee: Brenda (Kaminski) Quincy and Ray Eifel (co-chairs); Barbekka Hurtt, PhD, Assistant Professor, Biology; Todd Telemeeco, DPT, PhD, Assistant Professor, Physical Therapy; Jessica Trompeter, PharmD, Assistant Professor, PA Studies and Pharmacy; Nelson Gustin MD (clinical preceptor); Neal Gaither MD, (clinical preceptor); Jenni Dorsey, PA-C (Class of 2006); Carley Jacobs, PA-C (Class of 2007); Erin Greene, PA-S (Class of 2008); Kendra Meyer, PA-C (former adjunct faculty); and Alyson Humphreys, PA-C (Class of 2004).

- Clinical Phase Sub-Committee: Jessica Trompeter (chair), Rachel Carlson, PA-C (PA Faculty), Amanda Welbourne, PA-C (SU Alumni, Clinical Coordinator), Jessica Byrd, MD (Preceptor), Richard Moore, MD (clinical site evaluator), Naila Ghabib, PA-C (Preceptor), Michael Lapp, PA-C (Preceptor) Ellena VanOrmer, PA-C (PA Alumni, Class of 2006) Julie LaCoursiere, PA-S (Class of 2008), Andrea Dempsey (staff)

- Admissions & Students Sub-Committee: Rachel Carlson, Associate Director (chair); Abigail Griffeth, Director of Undergraduate Admissions; Ashley Smith, PA-C (Class 2007); Drew Hamer, PA Student (Class 2009); Sarah Johns, PA Student (Class 2008); Dr. Jennifer Bryant, Assistant Professor, Biology; Amanda Welbourne, PA-C, (Alumni - Class 2003 and Clinical Coordinator); Cathy Carr, Office/Data Manager

- Administrative Sub-Committee: Anthony Miller (chair), Cathy Carr, Office/Data Manager.

- Student/Graduate Focus Group: Dr. R.T. Good, (facilitator), Class of 2004: Monica Unni, Class of 2005: Jennifer Miller, Sarah Safa & Richard Lewis, Class of 2007: Andrea
• External Evaluators: Mr. Paul Lombardo and Dr. Albert Simon served as external consultants for the review of the application for continuing accreditation, self-study report and other supporting materials. In addition, they conducted a mock accreditation review on January 16, 2009. Both individuals are well-known and respected PA educators with experience as program directors, educators and Mr. Lombardo served as an ARC-PA on-site evaluator.

The individuals listed above provided formal assistance and feedback to the self-study process. However, feedback from many others was channeled through these representatives in order to provide comprehensive and wide-ranging perspectives. The annual retreats have provided a venue for periodic review of outcomes data from a variety of sources including end-of course evaluations, end-of-program and graduate surveys, PANCE and PACKRAT data, and preceptor feedback. These data (and others) have provided a foundation for faculty planning and revision of program policies, processes, and curriculum. Examples of curricular revisions that have been submitted to and approved by University Curriculum Committee (UCC) since the last site visit include:

• Expanding Anatomy (PA-503 & PA-504) from one course to two, and resequencing over two semesters.*
• Increasing hours of Pharmacology (PA-540) from 3 credits to 4.
• Increased Clinical Medicine I (PA-522) credits from 4 to 5.*
• Increasing hours of Clinical Medicine II (PA-522) from 2 credits to 3.
• Addition of genetic module to PA 504 to respond to new ARC-PA Standards.
• Resequencing Scholarly Project I (PA-660) earlier in the curriculum to allow more time for completion.
• Added capstone requirement (summative evaluation) as requirement for Scholarly Project II (PA-662) and renamed to Scholarly Project II and Capstone.

Note: total credit hours (83) have remained the same. Credit (contact) hours were redistributed from other courses. Curricular revisions marked with “*” were made as a direct result of the self-study outcomes of the 2004 SSR.

The principal author of the SSR is Anthony A. Miller, Director, Division of Physician Assistant Studies. Significant contributors to the report are the Sub-Committee chairs listed above.

Section II: Description of Continuous Self-Assessment

The process of continuous self-assessment is fully integrated into the operations of the DPAS and provides data that after careful analyses, are used to drive quality improvements on an ongoing basis. The framework for this process is outlined in the Outcomes Assessment Plan found in Appendix I1. However, self-assessment activities are not limited to those described in this document. Decisions resulting from the continuous self-assessment process are primarily data-driven; however, we recognize the value of informal feedback mechanisms in decision-
Faculty Centered Activities

- **Monthly Faculty Meetings and Monthly Division Meetings**: These meetings are utilized to provide updates for the faculty and staff, discuss evolving issues, planning of routine operations (e.g. semester schedules), evaluation of feedback from constituents (students, preceptors, guest lecturers etc.) and problem solving discussions leading to the development of plans to address issues raised. Each Division meeting is guided by a formal agenda, which includes standing items such as student issues (including individual and group performance on recent evaluations), clinical issues, and facilities issues. Student representatives are invited to the monthly Division meetings to present issues and provide recommendations. Agendas and minutes are available for review by the accreditation team.

- **Debriefing Meetings**: At the conclusion of major activities conducted by the program, a several hour to half-day meeting is typically held to review the processes and outcomes for the activity recently concluded. This allows evaluation of strengths and weaknesses as well as preliminary planning while issues are still fresh in the minds of the participants. An example is admissions where the Admissions Committee reviews the results of the process including evaluation forms completed by candidates and makes recommendations for minor modifications for the next cycle.

- **Annual Retreat**: A retreat is held annually for all Division faculty and staff. At this retreat, larger issues such as curriculum and overall operations are reviewed, evaluated and strategies developed for improvements. A SWOT (strengths, weaknesses, opportunities and threats) analysis is also conducted. This provides an opportunity to consider the impact of emerging external forces that may potentially impact the program and/or curriculum (e.g. legislative changes).

- **University-Wide Meetings**: Members of the DPAS regularly participate in University-wide governance activities as well as special purpose meetings which are involved in the assessment of current operations and quality improvement planning. DPAS representation in University governance helps to ensure PA Program policies are consistent with those of the University, potential revisions to University policy do not have a negative impact on the Program, and that issues relevant to the Program are considered. Examples include the Health Professions Council, which is comprised of all School of Health Professions Division Directors and meets monthly. Other examples include Ms. Carlson’s participation on Faculty Senate (currently she is the president) and Mr. Miller’s participation on a Shenandoah University/Valley Health System Liaison Committee.

- **Annual Faculty Development Plan & Evaluation**: Each faculty member prepares a development plan with specific objectives related to teaching, scholarship, service and leadership annually. At the end of the year, evidence of outcomes are reviewed with the program director.
Student Centered Activities

- **Evaluations of Course/Instructor:** Are completed online by students each semester for each course. These were summarized by the Division staff to protect the anonymity of the students. The results are reviewed after grades are submitted. Beginning in 2007, course evaluations were conducted on-line through a vendor. Faculty now have direct access to their evaluation summaries at the end of the semester and grades have been submitted. The Scholarly Project Experience Evaluation was first initiated in 2007 and is completed on paper because the type of questions found on the on-line course survey are not relevant for this form of instruction.

- **Student End of Rotation Evaluations:** Are completed via a web-based survey tool at the completion of each clinical rotation and address the quality of instruction as well as the clinical site. These are reviewed on a regular basis by the Clinical Coordinator and help guide decisions such as continuation of clinical training sites.

- **Director’s Hour:** Meetings are held at least once a semester and more frequently on an as needed or as requested basis. This provides an opportunity for students to provide informal feedback for the Director to explain emerging issues.

- **End of Program Evaluation:** Students scheduled for graduation are provided an opportunity to retrospectively evaluate all aspects of the PA Program. These data are used in the annual retreat and curriculum planning processes.

- **Course Evaluations:** Individual student and class performance on quizzes, examinations (written and practical), and other evaluation mechanisms are reviewed by the instructor/course coordinator to determine gaps in instruction, misunderstanding of material etc. This may be manifested for example by a large number of students missing certain items, low scores on specific OSCE cases etc. In some cases, these issues are brought to the entire faculty.

- **Summative Evaluations:** Review of student performance on end-of didactic proficiency examinations and end-of-program proficiency examinations. These examinations consist of two parts, a written (PACKRAT) and practical (faculty developed OSCEs). Student performance is compared to other academic indicators (e.g. GPA), national performance (PACKRAT), and performance standards (cut scores) set by the faculty.

- **Student Admission Demographics:** A profile of matriculating students is entered into a data base. This allows the program to compare demographics with the national profile and previous classes. In addition, this information is used later to try to identify predictors for success or attrition. For example, the program recently ran correlations on undergraduate GPAs, GRE scores, admissions scores etc. on various outcomes including cumulative GPA, PACKRAT scores, PANCE scores etc.

External Focused Activities

- **Advisory Committee:** The Division of Physician Assistant Studies has an advisory committee consisting of community, University, internal and student representatives. The Advisory Committee reviews and approves major documents such as Graduate Competencies and Mission Statement. In addition, they provide guidance to the Division to ensure the educational program is meeting the needs of the community. This group meets formally on an annual basis.
• **NCCPA Performance:** Shenandoah University graduate performance and pass rates are compared on a longitudinal and annual basis to prior years and to national performance. Trend analysis is conducted on content and task areas and benchmarked to peer programs.

• **Graduate Surveys:** Graduates are surveyed within six months of graduation regarding curriculum (in terms of preparation for work), availability of jobs and other issues of importance for program planning. Results reviewed at Division retreats.

• **Preceptor Surveys:** Are conducted every other year. The first was completed in 2008 under the direction of the clinical self-study sub-committee. The results were reviewed at Division retreats.

Outcomes of both formal and informal data sources are reviewed at regular meetings of the Division and faculty as well as special purpose meetings and retreats. In particular, areas not meeting benchmarks established in the Outcomes Assessment Plan are reviewed in more detail to determine causes and to plan strategies for improvement. In most cases, data are compiled in databases (Access, Excel and/or SPSS) to enhance the ability to generate reports and analyses for periodic review and longitudinal comparisons. These data provide the foundation for review of curriculum and general operations leading to revisions and re-evaluation to ensure effectiveness. Other outcomes data are used for special purposes and may be done for a limited time or periodically as needed. Two additional examples include a survey of emotional intelligence being conducted by Mr. Eifel to determine potential utility as an admissions tool, and a survey of study habits & time management that was conducted by Mr. Miller in order to identify potential interventions to reduce attrition. The diagram below from the Middle States Commission on Higher Education, “Student Learning Assessment: Options and Resources” is an accurate depiction of the processes used by the SU Division of Physician Assistant Studies except that our context includes the Division mission and values in addition to those of the University.

**Figure 1. The Assessment Process**
Section III: Self-Assessment Outcomes

Section A: Administration

A1 Sponsorship

Institutional Accreditation, Sponsorship & Location

Shenandoah University (SU) is accredited through 2010 by the Commission on Colleges of the Southern Association of Colleges and Schools and is authorized to offer the Master of Science in Physician Assistant Studies. The Division of Physician Assistant Studies is administratively located in the School of Health Professions. Currently the Division of Physician Assistant Studies is synonymous with the Physician Assistant Program. However, the administrative structure was established at the division level to permit the development of other educational programs under the Division of Physician Assistant Studies. The Program Director sits on the Health Professions Council and reports directly to the Vice President of Academic Affairs. An organizational chart is included in Appendix E. Shenandoah University is a private non-profit, coeducational institution of higher education with a focus on liberal arts and career preparation. Together with its affiliated clinical agencies, the University and the DPAS has sufficient resources to offer a quality educational program. Currently the PA Program has over 200 clinical affiliates to provide a broad-based exposure in the primary care and generalist disciplines. The University, through its College of Arts and Sciences and its School of Health Professions, offers clinically oriented basic science curriculum, which supports the prerequisite and PA Program specific requirements.

Institutional Responsibilities

The University assumes responsibility for admissions, curriculum planning, coordination of teaching, appointment of faculty, and granting of a Master of Science in Physician Assistant Studies after verification of satisfactory completion of the program of studies. PA Admissions is a coordinated effort between the Department of Admissions under the direction of David Anthony, Dean of Admissions and the Division of Physician Assistant Studies under the direction of Anthony A. Miller. Applications are received by the Division directly from the Centralized Application Service for Physician Assistants (CASPA) and processed by the Admissions Committee. The Admissions Department primarily handles recruitment and acceptance of candidates based on PA Admissions Committee recommendations. However, the PA Program employs a Recruitment and Placement Coordinator (Dempsey) under a federal training grant. In addition to other duties described elsewhere, her responsibilities include student recruitment with focus on recruitment of candidates from underserved areas or under-representation in the PA profession.

Curriculum planning is conducted at the Division level. However, new or revised curriculum must be reviewed by the Health Professions Curriculum Committee, then approved by University Curriculum Committee and Faculty Senate. Final approval of curriculum is made by the Vice President of Academic Affairs and the Board of Trustees. The program director has the authority through the Vice President of Academic Affairs for the coordination of didactic and
clinical education. Full time faculty are appointed by the Board of Trustees upon the recommendations of the Vice President for Academic Affairs. Faculty recruitment and screening is the responsibility of the program director and is implemented through ad hoc Faculty Selection Committees appointed and charged as needed. Part-time (adjunct) faculty are approved by the VPAA upon recommendation of the director.

Upon recommendation of the faculty, the program director is responsible for determining the satisfactory completion of the requirements for the Master of Science in Physician Assistant Studies including summative evaluation and completion of capstone experiences. Documentation is transmitted to the Registrar for notation on the official transcript and preparation of the diploma.

The University has a regular security force to help ensure the safety and security of students. Since the DPAS is located at the Winchester Medical Center, their security force provides for safety and security measures through regular patrols, security cameras and other measures. Safety issues and precautions are reviewed by the program director and a WMC security representative during orientation week. Information regarding crime on campus is published on the web and in the catalog as required by law (see link to annual report below). There have been no instances of security threats on any of the campuses for PA students since the inception of the program. Annual Security Report - 2007:

Institutional Resources

Financial Resources

Since its inception, the program has enjoyed strong financial support from internal and external sources. Financial support has grown modestly annually commensurate with enrollment growth in order to support obligations to students enrolled in the program. The table below provides an analysis of financial support for the last three budget periods and reflects that all years the SU PA Program financial resources have been slightly less than the national mean in real numbers but well within one standard deviation and reasonable considering the SU headcount is less than the national average. The SU PA Program has been able to continue to provide a high quality program with sufficient institutional funding and federal grant support. Budget figures provided in the table below do not include additional indirect support to the program by the institution (VPAA Office) in the form of faculty awards for graduate studies, continuing education, and research. This averages approximately $10,000-$12,000 per year.

The PA Program and its students has also benefitted from a concerted effort by the Program and Medical Directors to secure additional external funding. Federal funding has averaged $134,000 per year over the past four years. Currently, the PA Program is in the first year of a three year funding cycle ($136,987 is expected for FY09-10). In addition, the PA Program has established scholarship endowments with principals currently over $710,000 yielding approximately $35,000 in scholarships annually. In addition, there is a student research fund at $110,000 yielding $5,500 to support student scholarship annually. Finally, an endowment established by a local family foundation and augmented by student fundraisers is at $12,000.
### Table 1: Comparison of Funding 2006-2009

<table>
<thead>
<tr>
<th>Year</th>
<th>SU Internal Funding</th>
<th>SU External Funding (Federal Grant)</th>
<th>Total</th>
<th>National Mean (Institutional)</th>
<th>National Mean (All Sources)</th>
<th>SU Fall Headcount Entering Class **</th>
<th>National Average Size Entering Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006-2007</td>
<td>$874,966</td>
<td>$91,280</td>
<td>$966,246</td>
<td>$795,539 (SD = 403K)</td>
<td>$1,077,814 (SD = 739K)</td>
<td>39</td>
<td>42</td>
</tr>
<tr>
<td>2007-2008</td>
<td>$978,820</td>
<td>$130,639</td>
<td>$1,109,459</td>
<td>$1,265,090 (est.)</td>
<td>$1,389,302</td>
<td>39</td>
<td>43.5</td>
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<tr>
<td>2008-2009*</td>
<td>$969,944</td>
<td>$142,891</td>
<td>$1,112,835</td>
<td>Not available</td>
<td>Not available</td>
<td>43</td>
<td>Not available</td>
</tr>
</tbody>
</table>

*Estimated – current fiscal year ends June 30, 2009
** Includes decelerated students returning

Classrooms and Laboratories

The Division of Physician Assistant Studies is housed in a nearly 10,000 square foot office suite located in Medical Office Building II (MOB II) on the grounds of the Winchester Medical Center. The space was designed by the PA director and faculty and was first occupied in August 2001. The space consists of two classrooms consisting of seating for 38 students each that can be opened to one large classroom, a physical exam/technical procedures laboratory with 15 stations (14 adult and one pediatric), a student lounge, two conference rooms, a study room, a faculty/staff workroom, nine offices, a reception area and storage room. Each classroom is equipped with an audio-visual platform that includes computer, video-projector (each upgraded this past year), document camera (Elmo) and DVD/VHS video player. The PA facilities and all SU campuses are equipped with a wireless network system. A computer technician is on-site in the PA facilities for two to four hours per week during the regular semester. A full cadaver laboratory is available at the Cork Street facilities where the Physical Therapy Program is located. It is only 10 minutes from the PA facilities and is accessible during non-business hours through a combination lock. The facilities are state-of-the-art and have been consistently rated high by students and visitors on surveys and on student focus group summaries.

Office and Meeting Spaces

All full-time faculty have private offices with bookshelves and space for storage of files. Students have secure access to the educational facilities during non-business hours. However, the faculty and staff office area is secured by a locked door as well as locks on individual offices and files. Part-time/adjunct faculty are required to share office space although not at the same time. The current facilities are more than adequate to meet the Division’s needs but will be challenged as the PA Program continues to grow. Negotiations have been initiated by Shenandoah University’s President with the CEO of Valley Health System for the construction of an additional wing to the Health Professions Building (also on the grounds of Winchester Medical Center). This facility would expand the space allocation for the PA Program and would also consolidate the Health Professions (including PT and OT) in one facility.
Office Equipment

All full-time faculty and staff have a state-of-the-art desktop computer equipped with the full Microsoft Office suite of software, LXR test bank/scoring software and SPSS. Each faculty member also has a laptop computer available for use at conferences etc. In the faculty/staff workroom there are the following: fax/color copier, copy machine, flatbed scanner and computer, and optical test scanner. In addition, large or more advanced copying (e.g. printing of invitations) may be sent to an on-campus facility. Office and educational/lab supplies are readily available. The 2008-2009 annual budget for supplies is $13,723 (with an additional $2,100 available through the HRSA grant). This has been sufficient to meet the needs of faculty, staff and students.

Academic Resources

Students and faculty have several options available for access to educational resources. First, the library databases are web based and available on-line from virtually anywhere. A subscription to MD Consult is available through the library database, which includes access to 39 full-text medical reference books, 1,000 clinical practice guidelines and 60 journals. In-person access is available at the Shenandoah University Health Professions Library and the Smith Library on the Shenandoah University main campus. Currently the Smith and HP libraries combined have over 135,769 volumes with 2,300 at the Health Professions Library. The University has subscriptions to 306 health professions related journals (in print) with another 3,899 accessible on-line. These resources are available at no additional charge to the students. The Division of Physician Assistant Studies also keeps a small library of reference books and instructional software (e.g. ADAM®) available in the Study Room. In 2007, the library added “Anatomy TV” from Primal Pictures. This program is a detailed 3D anatomy study tool. Access to library resources has never been a concern raised by students on surveys or focus groups. Access to library data bases on or off campus is available through the following URL: http://www.su.edu/library/intrntrs.htm

Instructional and Technology Resources

Instructional resources are available to students and faculty to support instruction and learning and feedback from students and graduates indicates this area to be a strength. PA students are required to participate in a technology program, which provides for the lease of a wireless laptop computer and technology support for a total of $2,500 (down from $3,000 in 2007). The students are allowed to keep the laptop computers upon graduation. All PA faculty use web based instructional support in the form of Blackboard® for their courses. The PA program requires the purchase of personal digital assistants (PDAs) before the clinical year for patient tracking and other clinical tools.

Until 2006, incoming students were surveyed at orientation regarding their computer skills. The majority of students have considered themselves proficient in the following areas: internet/web, word-processing, and email. Fewer report proficiency in presentation software (e.g. Powerpoint) electronic spreadsheets, databases, statistical software packages (SPSS). Because the data remained fairly consistent over several years, the program discontinued the surveys. For faculty or students who require software training, the University provides on-line training courses and
workshops on campus are provided at no cost (schedule to be available to on-site team). In addition, the faculty assist students with some software packages as needed (e.g. SPSS). Orientation sessions are provided annually on the use of the SU inter/intranet, Blackboard®, and use of library databases. A technician is available at the PA Program one half-day per week during the regular semester for laptop support.

A2 Program Personnel

The Division of Physician Assistant Studies is under the Directorship of Anthony A. Miller who has over 30 years experience in PA education and has been the only director since the inception of the Shenandoah University Physician Assistant Program. He reports directly to Dr. Bryon Grigsby, Vice President of Academic Affairs. In the School of Health Professions at Shenandoah University, there is no Dean level position. Instead, the activities of the health professions programs are coordinated by the Health Professions Council, which is comprised of the directors of the health professions programs. A chair is elected every two years. This system has worked effectively for the past 10 years.

The core faculty of the Physician Assistant Program include:
• Division Director/Program Director, Anthony Miller, M.Ed., PA-C (1 FTE)
• Medical Director, James C. Laidlaw, M.D. (0.2 FTE)
• Associate Director, Rachel Carlson, MSBS, PA-C (1 FTE)
• Core Faculty, Raymond Eifel, M.S., PA-C (1 FTE)
• Core Faculty, Brenda (Kaminski) Quincy, MPH, PA-C (1 FTE)
• Clinical Coordinator, Amanda Welbourne, MSPAS, PA-C (1 FTE)
• Faculty, Jessica Trompeter, PharmD. (0.5 FTE)

Adjunct faculty include (approximately 1.25 FTE):
• Anatomy: Todd Telemeceo, PhD, DPT
• Functional Neuroanatomy: Andrea Fergus, Ph.D., PT
• Medical Physiology & Genetics: Jennifer Bryant Ph.D.
• Regional Clinical Coordinators: Richard Moore, M.D., Anne Schempp, PA-C, & Kathy Riley, PA-C
• Physical Assessment Lab Instructor & Tutor: Steve Galeski, PA-C
• Various guest lecturers & Anatomy lab instructors

Support Staff:
• Cathy Carr, Office/Data Manager (1 FTE)
• Mari Stoilova, Program Secretary/Receptionist (1 FTE)
• Andrea Dempsey, Recruitment & Placement Coordinator (1 FTE)
• Heidi Michaels, Clerical Assistant (0.5 FTE)
• Work Study Student (approximately 4 hours/week)

Resumes/Curriculum Vitae and job descriptions for the program director, medical director and core faculty are found in Appendix D. Appointments for all core faculty are consistent with that of other health professions faculty at Shenandoah University. Mr. Miller, Ms. Carlson, and Dr.
Laidlaw are at the Associate Professor rank and other core faculty are at the Assistant Professor rank. The University does not have a tenure system and initial contracts are issued on an annual basis. However, full-time faculty are eligible for three-year rolling career contracts after an initial five-year probationary period. In some cases, this time period may be waived based upon significant prior experience and national reputation. Currently, Mr. Miller and Ms. Carlson are on a career contract. Policies and procedures for advancement in rank and career contracts are found in the SU Faculty Handbook [http://www.su.edu/academic_affairs/Faculty%20Handbook.pdf].

Generally speaking, advancement in rank is based upon demonstrated excellence in teaching, scholarship, and service as recommended by the Division Director, evaluated by the University Faculty Evaluation Committee and approved by the VPAA.

The core faculty provide the majority of instruction or course coordination for the program. The instructor of record is responsible for ensuring the instructional integrity of their courses and evaluation of student performance. At each Division meeting, students encountering academic, personal, or professional difficulty are identified and their situation reviewed by the faculty. Plans of action are identified and may include referral for advising (all students are assigned a core faculty advisor), additional tutoring assistance, counseling (professional or personal), or referral to academic support services for evaluation. Core faculty are also involved in curriculum and program evaluation through the continuous and periodic self-assessment processes described above.

The program has experienced relative stability of the core faculty for the past 4 years. Since the last accreditation visit, the program has added one additional full-time core PA faculty, one 0.5 FTE pharmacist, and 1.5 FTE staff. During the same time frame, we have experienced the loss of two permanent faculty members. One individual left in 2004 after 17 months for career advancement in another PA Program as an associate director (Schwarz) and the other in January 2008 after 3.25 years to return to clinical practice (Dalton). Recently, Mr. Eifel has announced his intention to resign from the PA faculty after 7 years at the end of Spring Semester 2009 (May) and a national search has been initiated.

Currently all PA core faculty are certified and licensed in the Commonwealth of Virginia, three are in clinical practice (Quincy, Welbourne, and Carlson) and three are enrolled in doctoral programs (Carlson, Eifel and Quincy). The combined clinical and educational experience for all the core faculty is over 83 years (average 7 years).

The number of faculty and staff employed by the DPAS is favorable when compared to national averages. According to the PAEA 23rd Annual Report, programs average 4.4 PA faculty and 1.3 non-PA faculty (excludes PD, MD and staff). Currently, the DPAS has four full-time PAs (4.0), a pharmacist (0.5), three basic science faculty teaching a total of 12 credits (equivalent to 0.5 FTE), one lab instructor/tutor (0.2 FTE) and three regional coordinators (0.5 FTE). Therefore, the SU DPAS has the equivalent of 5.75 FTE faculty, equivalent to the national average. The DPAS has 3.5 FTE staff which is 1 FTE higher than the national average. With the current student headcount of 72 students, there is a student faculty ratio (SFR) of 10:1 (includes program director and medical director) and one employee per 7 students. During the Fall Semester 2008 when there were three classes enrolled, the ratio was one employee per 9.7 students which is considered to be very good. According to the PAEA 23rd Annual Report, the typical PA program
has 10.2 FTEs across all categories of personnel. SU is at 10.45 FTE which is slightly better than the national average. However, our average class size is slightly less than the national average making our SFR and personnel to student ratios much better than average.

The program director is Anthony A. Miller who is a certified physician assistant and has over 30 years experience in PA education. Mr. Miller has a master’s degree in education and is a doctoral candidate in higher education leadership at the University of Toledo. Mr. Miller has served as an evaluator for the ARC-PA and as an educational consultant for physician assistant programs. He is employed full-time by Shenandoah University and is responsible for the organization, administration and evaluation processes for the program. In addition, he provides overall supervision for the medical director, faculty and staff.

The medical director is James C. Laidlaw who is a physician licensed in the Commonwealth of Virginia. Dr. Laidlaw has over 45 years of experience as a cardiologist and has been the medical director for Shenandoah University’s PA Program since its inception. Dr. Laidlaw is board certified in internal medicine and currently practices as a volunteer physician at the local free medical clinic. He regularly participates in faculty, Division and Advisory Committee meetings. He provides regular input on curricular matters to ensure the instructional component of the program meets current practice standards. Dr. Laidlaw has been active in helping to secure physician guest lecturers and clinical training sites and is on the Board of Directors for Winchester Medical Center. He has been instrumental in assisting the program secure grants from Valley Health System/Winchester Medical Center and a $500,000 endowment for scholarships from the Mellon estate.

Raymond Eifel was hired as an assistant professor in July 2002. Mr. Eifel is a certified physician assistant with training in a surgeon’s assistant program and a one-year internal medicine postgraduate program. He also has a master’s degree in exercise physiology. He has 6 years clinical experience, primarily in the field of urology. He is currently completing his doctoral studies in higher education at The George Washington University.

Rachel Carlson was hired at the rank of assistant professor in September 2002 and was recently promoted to associate professor. She is a 2001 graduate of the Medical College of Ohio and has experience in family medicine. Ms. Carlson works clinically at a local health care facility and nearly completed her doctoral studies in higher education at Nova Southeastern University. In August 2007, Ms. Carlson was appointed Associate Director of the PA program.

Brenda (Kaminski) Quincy was hired as an assistant professor in 2005. She is a 1988 graduate of the University of Wisconsin-Madison PA Program with 15 years clinical experience and completed a master’s degree in public health at The George Washington University. She works approximately 1/2 day a month at the local Free Clinic, and is completing her doctoral degree in health sciences with an international health concentration at TUI University.

Amanda Welbourne serves as the clinical coordinator. She joined the PA Program in May 2008 at the rank of assistant professor. Ms. Welbourne has 5.5 years of clinical experience and currently continues to work clinically ½ day a week at a local health care facility. She is a 2003 graduate of the Shenandoah University PA Program.
Jessica Trompeter was hired August 2007 as a part-time (0.5 FTE) assistant professor. Dr. Trompeter is a pharmacist with 3 years of clinical experience. She teaches the Clinical Pharmacology and Clinical Therapeutics courses and is active in many other aspects of the program including admissions, advising and program committees. She is a full-time faculty member with her other 0.5 commitment to the SU School of Pharmacy.

The University assures continuing professional growth for full-time faculty through several mechanisms. These include:
- Twenty percent contractual release time for the purpose of professional development in the form of clinical practice, consultation or continuing education.
- Professional development grants for all faculty of $400.00 per year.
- Internal competitive grants for faculty development (individual and interdisciplinary).
- Tuition assistance grants for faculty pursuing terminal degrees.
- Sabbaticals for eligible faculty after seven years of service.
- Annual faculty development workshops in May.

In addition, the PA Program budgets (institutional and federal grant) provide financial support for attendance at state or national meetings. For the 2008-09 fiscal year, $10,000 (institutional and federal grant) is available for conference fees and support travel expenses for professional development. Typically, each faculty member is fully supported for one national meeting a year and four of the PA program faculty have attended one of the PAEA add-on workshops over the past two years. PA faculty are eligible to participate in the Winchester Medical Center’s weekly conferences (Category I) for annual dues of $100.00.

All physician assistant courses are assigned one of the core or adjunct faculty listed above to serve as course instructor or course coordinator. These individuals are responsible for generating a course schedule and syllabus, which includes objectives, requirements and evaluation procedures. Instructional assignments are made by the program director in consultation with core program faculty and based upon qualifications, experience, availability, and overall instructional load. In cases where guest lecturers are utilized in a course, selection is made by the course coordinator. Criteria used by the course coordinator for selection of guest lecturers and topic assignments include: the individual’s practice specialty, evaluation of lecture from previous year(s), and availability. Because, the honorarium paid to guest lecturers is minimal ($100/hour for doctorally prepared and $75/hour for others), the guest lecturers tend to be highly motivated to teach PA students. Currently, the program has over 71 individuals in its guest lecturer data base. Course coordinators are responsible for ensuring the guest lecturers are prepared in terms of understanding the topic to be addressed, objectives of the course, and level of students. This is done through a phone conversation and/or email and a lecture confirmation letter. Most (over 95%) of the instruction is provided by graduate physician assistants, physicians, or other health care professionals (e.g. nurses, PT, AT etc.). There are only three physician residency programs (all Family Medicine) in the immediate geographic area. Therefore, very few resident physicians are utilized in the didactic and clinical curricula. In addition, the location of the program provides little competition for clinical training sites with medical students or residents.
As noted above, student academic, professional and personal issues are reviewed at every Division meeting. Course instructors/coordinators report on concerns in any of these areas and the faculty develop recommendations including but not limited to meetings with advisors, referral to academic support services or additional tutoring. In some cases, students are referred to the program director.

The clinical curriculum is under the responsibility of the clinical coordinator who ensures that there is appropriate supervision and assessment of students during this phase of their education. She is assisted by two regional coordinators contracted for 8 hours/week who have primary responsibility for conducting site visits but also assist with generating test items for end of rotation examinations. Clinical preceptors are either licensed physicians who have completed residency training, certified physician assistants, certified practitioners or certified nurse midwives. The identification of both administrative contacts and clinical preceptor (instructors) is made during the initial investigation of a clinical site, recorded on the clinical preassessment form and updated periodically.

The Division of Physician Assistant Studies has three full-time and one half-time support staff to provide the administrative and technical support for the PA program. In addition to the full-time support staff, the program provides graduate (physician assistants and retired physicians) and peer tutors who provides service for 4-8 hours per week and a work-study student who assists the full-time staff with routine tasks. The University also provides technical staff support as needed for instructional computing, maintenance issues etc.

Salaries for all core faculty are supported by institutional funding. One and one-half of the staff positions are funded through a federal training grant (year 1 of 3). The program anticipates sufficient institutional funding for at least the full-time position if the grant is not renewed.

A3 Operations

Other than clinical rotations, the Shenandoah University PA Program does not offer its curriculum at geographically remote sites. When students are placed at remote clinical sites (we define as greater than 90 miles from campus), it is often at their request. They are not exempt from participating in the end of rotation seminars. Supervision and methods used to ensure a quality educational experience are addressed in Section C4.

Fair Practices & Admissions

The University and Division of Physician Assistant Studies distributes announcements and advertising through its web site (www.su.edu/pa), the Shenandoah University Graduate Catalog, and direct mailings with literature including the Admission Guidelines Booklet. A comprehensive update to these documents to reflect new policies and procedures, costs, curriculum etc. is done annually at the conclusion of the admissions cycle. Minor changes are made on an as needed basis. University and Division policies are non-discriminatory and statements to that effect are printed in all major documents (e.g. catalogs, web sites). There have been no allegations of discrimination filed by PA students since the inception of the program.
Admissions materials provided to prospective students (electronic and printed) accurately reflect the University and Division policies (including those dealing with grievance procedures, withdrawal and refunds), the curriculum and costs. These documents are also reviewed with admitted students at orientation sessions. In addition, to the orientation sessions and open access through the web site, the program makes a concerted effort to inform prospective students through a presentation by the director at interview sessions and at a pre-orientation session held in June or July each year for incoming students. Three graduate open houses are provided annually in order to provide information to prospective students and answer questions. During pre-orientation and orientation, the Handbook is reviewed with students and their signatures are obtained verifying that they have read, understood and agree to comply with the Handbook provisions. An audit conducted by the faculty revealed that all of the requirements contained in Standard 3.07a-m are addressed in the PA Program Student Handbook or on the web site.

Faculty policies (including those related to grievances) are contained in the Shenandoah University Faculty Handbook. The Handbook is maintained up-to-date by the Office of the Vice President of Academic Affairs. The current version is found on the web at http://www.su.edu/academic_affairs/Faculty%20Handbook.pdf.

Policies regarding students working while in the program are clearly defined in the Physician Assistant Studies Student Handbook section titled “Outside Employment.” Students are provided a copy of the Handbook at orientation (on a thumb drive) and it also available on the web site for prospective students. Outside employment is not forbidden but it is discouraged and must not conflict with the student’s didactic or clinical curriculum. Students are not required to perform clerical or administrative duties for the program and potential PA students are generally not accepted for work study positions in the Division due to the potential confidentiality issues. The Clinical and Preceptor Manuals clearly state that PA students are not to be used as substitutes for clerical or other staff.

Student Records

Records for active students which include admissions data, evaluations and correspondence are securely stored in locked files in the Office/Data Manager’s office. Permanent transcripts and the student’s official files are maintained in the Registrar’s Office on the main campus.

Faculty Records

Official faculty files are maintained by the Office of Human Resources and the Office of the Vice President of Academic Affairs. The Division of Physician Assistant Studies also maintains a faculty file with a current CV, job description, annual faculty development report and routine correspondence for all full-time faculty. Part-time or adjunct faculty members have current CVs on file with the Division.

Admission Policies and Procedures

The Shenandoah University PA Program has participated in the Centralized Application Service for Physician Assistants (CASPA) since 2005. Prospective students can access relevant
information including policies for advanced placement, transfer, credit for experiential learning, academic standards and technical standards through a number of mechanisms. Most access information through the program’s web site (www.su.edu/pa). The information is also available in printed documents mailed to prospective candidates upon request. For more personal contact, some candidates elect to attend one the three open house/information sessions held annually or schedule an individual appointment with the program director. Last year, the program averaged 15 potential candidates (with average number of 12 parents or friends) for each of the four open house sessions. The Admissions Guidelines and program brochure are found in Appendix G.

The admissions process is conducted according defined and published policies and guidelines. Orientation sessions are conducted annually for members of the Admissions Committee1. The process begins by review of the candidate’s grade point average (GPA) and prerequisites. If CASPA GPAs meet or exceed the bar (cumulative and BCP ≥ 2.90) and a satisfactory plan is submitted for completion of prerequisite courses, the file is sent to one member of the Admissions Committee for review. The candidate’s file is evaluated and scored in three primary areas: reference, health care experience (qualitative and quantitative), and narrative. A criteria sheet is provided to each reviewer. Until 2008-09 admissions cycle, candidate files were reviewed by two individuals. Because of the increasing number of applications (534 last year), the Admissions Self-Study Committee conducted a study and found no significant differences in reviewer scores. This evidence suggested that efficiencies could be achieved through the use of one reviewer without sacrificing quality or fairness. Under this new process, individual reviewers are encouraged to request a second review when deemed warranted. So far, 5 candidate files have been subjected to second reviews.

Science GPA and overall GPA are automatically scored. Candidates achieving a cut score established in advance annually by the Admissions Committee (based on review of previous year data) are invited for interviews. Interviewers are provided an orientation, interview question bank, evaluation forms and criteria sheets in advance. The interview session consists of the following: overview of the program presentation, individual and group interviews, meetings with current students, and a tour. Interviewers meet at the end of the session to review candidates. Scores from individual and group interviews are combined with pre-interview scores. The Admissions Committee typically meets the same day but not later than two weeks of each interview session to select candidates for admission. Selection is primarily based upon meeting or exceeding a pre-determined cut score but decisions are also influenced by review of grade point averages, GREs and outstanding prerequisites since overall scores may be unduly influenced by one factor such as extensive health care experience. A quasi-rolling admissions process is used. Candidates exceeding the cut score are offered acceptance to the program. Others are either placed on an alternate list or denied admission. In all cases written communication is provided to the candidate. After the application deadline and the remaining interviews are conducted, the Admissions Committee revisits the alternate list and offers admission to additional candidates until the quota is achieved. This past admissions cycle, because of the high conversion rate of admission offers, the alternate list was not tapped for the

1 The decision making body of the Admissions Committee is the PA Program faculty as a whole. The operations part of the Admissions Committee that participates in interviews includes graduates, non-PA faculty, and community PAs.
first time in the history of the program. A written description of process and evaluation forms will be available for the on-site evaluators.

Each candidate is provided an evaluation form at the time of interview. Last year’s evaluations (n = 54, response rate = 34%) yielded the following information. The average candidate applied to 5.42 programs; 100% visited the Program’s web site; 48.1% found the web site attractive, easy to use, and informative (an additional 35.2% checked two of the three qualities); 98.1% rated interactions with the Program as good (14.8%) or excellent (83.1%); 98.1% rated the overall selection process as good (20.4.8%) or excellent (77.8%); and 100% rated their overall evaluation of the SU admissions as good (23.8%) to excellent (76.5%). Two years ago, a student journal (blog) ([http://www.su.edu/student_profiles/student_profiles_hp.cfm](http://www.su.edu/student_profiles/student_profiles_hp.cfm)) was introduced on the web site. Approximately 65% of the candidates indicated that the student journals had some influence on their decision to apply to Shenandoah University.

The admissions process for the SU PA Program has consistently yielded above average classes with a profile fairly consistent with PA classes nationally as reported in the PAEA Annual Reports. The undergraduate grade point average has consistently increased over the past three years. Because of concerns regarding the relatively high attrition rate especially secondary to poor performance in the basic sciences, the program began to increase the benchmark for science GPA into admissions decisions beginning in 2006. Consistent with its mission, the SU PA Program has been fairly successful in recruiting candidates from rural and inner-city communities and disadvantaged backgrounds but less so with underrepresented minorities. It is unclear why there was a temporary increase in disadvantaged status for the Class of 2009. See table below for trends and comparisons.

**Table 2: Admission Data and Comparisons with National Profiles, 2008-2010**

<table>
<thead>
<tr>
<th></th>
<th>SU Class of 2008</th>
<th>National</th>
<th>SU Class of 2009</th>
<th>National</th>
<th>SU Class of 2010</th>
<th>National</th>
</tr>
</thead>
<tbody>
<tr>
<td>UG GPA</td>
<td>3.36</td>
<td>3.4</td>
<td>3.41</td>
<td>3.36</td>
<td>3.49</td>
<td>3.43†</td>
</tr>
<tr>
<td>UG Science GPA</td>
<td>3.33</td>
<td>N/A</td>
<td>3.31</td>
<td>N/A</td>
<td>3.39</td>
<td>3.35†</td>
</tr>
<tr>
<td>Female</td>
<td>91.2%</td>
<td>67%</td>
<td>86.1%</td>
<td>69%</td>
<td>75%</td>
<td>72%</td>
</tr>
<tr>
<td>Average Age</td>
<td>25.03</td>
<td>28.1</td>
<td>25.2</td>
<td>28</td>
<td>23.8</td>
<td>26.8†</td>
</tr>
<tr>
<td>HC in Months†</td>
<td>15.34</td>
<td>42.9</td>
<td>10</td>
<td>37.7</td>
<td>14.1</td>
<td>32.4†</td>
</tr>
<tr>
<td>% Minority</td>
<td>18.7%</td>
<td>22.7%</td>
<td>26.9%</td>
<td>22.6%</td>
<td>11.5%</td>
<td>N/A</td>
</tr>
<tr>
<td># Applicants</td>
<td>334</td>
<td>392</td>
<td>416</td>
<td>471</td>
<td>534</td>
<td>584</td>
</tr>
<tr>
<td>Class Size on Admission‡</td>
<td>37</td>
<td>42</td>
<td>36</td>
<td>43.5</td>
<td>40</td>
<td>N/A</td>
</tr>
<tr>
<td>Educationally or Economically Disadvantaged or both‡</td>
<td>13.5%</td>
<td>N/A</td>
<td>36.9%</td>
<td>N/A</td>
<td>15%</td>
<td>N/A</td>
</tr>
<tr>
<td>Permanent Residence Rural or Inner City</td>
<td>21%</td>
<td>N/A</td>
<td>34%</td>
<td>N/A</td>
<td>32%</td>
<td>N/A</td>
</tr>
</tbody>
</table>

1. HC Experience not required by SU but encouraged.
2. May be duplicated in cases where students checked “both”.
3. Preliminary data presented at the PAEA Educational Forum 2008
4. Does not include decelerated or LOA students
Although the program has a longitudinal tracking mechanism for admissions offers and deposits, this past year we did not predict the anticipated deposit forfeitures correctly and ended up oversubscribed; not utilizing the alternate list for the first time in the history of the program. This coupled with three students who returned from leaves of absence resulted in a matriculating class size of 43. Typically the program has experienced an average conversion rate (candidate accepts to offers) of 50-60%. It was not clear why this approached 80-90% towards the end of our admissions cycle last year. Although the program exceeded its ARC-PA capacity of 36 by 11% (excluding decelerated students) and 19% (including decelerated students), it did not exceed the overall approved capacity of 108 and sufficient resources (e.g. hired additional lab instructor) were made available to ensure quality instruction.

Section A - Strengths:

- The Division of Physician Assistant Studies enjoys strong administrative support and Shenandoah University has a proven track record of establishing successful academic programs especially in the health professions.
- The Program faculty are qualified by academic and clinical experience. Nearly all have a record of scholarship and two have received national recognition. Since the last visit, the program has increased the core PA faculty by 1.5 FTE and the staff by 1.5 FTE.
- The Program continues to attract an increasing pool of high quality student candidates.
- Facilities and instructional resources for the program are state-of-the art and support quality instruction. Regular upgrades to software and equipment have ensured that the Program has stayed up-to-date.

Section A - Areas Needing Improvement:

- Participation in CASPA has presented opportunities (increased applicants) and challenges (candidate withdrawals). To remedy this, we will be more conservative in our estimates of acceptance, withdrawals, and offers of acceptance. In addition, the program will petition ARC-PA to increase our incoming class capacity from 36 to 38.

Section B: Curriculum Requirements

B1 Instruction

The PA Program curriculum was initially developed in 2000 by the Program Director in consultation with the Medical Director, members of the Advisory Committee and members of the University community. The curriculum was modeled on that developed by Mr. Miller for the Medical College of Ohio and successfully implemented there as evidenced by student and preceptor feedback, successful accreditation and certification examination scores. The 83 credit hour curriculum sequence is developed using a “building block” approach whereas more complex material is offered after less complex, basic sciences are offered before applied sciences, and didactic classroom and laboratories experiences provide a foundation for clinical education. This is reflected in the prerequisites selected for admission, prerequisite courses within the curriculum, and the overall sequence. The 27-month curriculum is slightly longer than the “typical” PA program, which is 26.8 months (see Appendix F). Formal surveys of
clinical preceptors, employers and graduates have been conducted and have confirmed the overall success of the curriculum in the preparation of primary-care oriented practitioners. Recent analysis by the didactic self-study subcommittee of clinical preceptor marks for clinical rotation one over the past three years revealed no trends of knowledge base or clinical skill deficiencies that could be attributed to the didactic phase of the program. The evaluation includes overall assessment of clinical skills, problem solving, patient management and interpersonal skills. For 2006 and 2007, scores ranged from a low of 8.5 to a high of 9.7 on a 10 point scale. In 2008, the program switched to a five point scale and for the first rotation, scores ranged from 4.94 to 4.88 (more detailed report available on-site). Although the primary purpose of the preceptor evaluations are to grade individual student performance, these data were considered to be a useful surrogate overall evaluation of the didactic curriculum. A more detailed preceptor survey was also performed and the results described in section C.

Students are informed of the Program’s Mission and graduate competencies via the web site and at orientation. A syllabus with a course description, faculty information, learning objectives, expectations, evaluation procedures, assignments, schedule and other relevant information is provided at the beginning of each course. In the case of clinical rotations, this is provided in the form of a clinical manual, which is distributed during a pre-clinical orientation session. This past year, the program has moved from paper to electronic means (thumb-drives and Blackboard) for distribution of course materials and manuals.

Full and part-time faculty are oriented to the program and outcomes expected of graduates by the program director or course coordinator at the time of initial appointment. Orientation of guest lecturers often presents a challenge. However, the standard practice of the program is to ensure that the guest lecturer is oriented to the PA profession, the topic and subtopics, time frame for presentation and level of presentation during the initial contact (phone or email). Course coordinators are expected to send a lecture confirmation letter with more specifics including objectives and logistics. Core faculty attend all lectures where guest lecturers are utilized and feedback on previous presentations is provided to returning lecturers.

Clinical preceptors are oriented to expectations and objectives by the Clinical Coordinator via a phone conversation and follow-up visit. All clinical preceptors are provided a Clinical Preceptor Manual (on thumbdrive) that includes graduate competencies, learning objectives, suggestions for teaching strategies, evaluation instruments and other relevant information. The Preceptor Manual is consistent with the Clinical Manual provided to the students. Copies of these documents will be available to the on-site evaluation team.

Students are educated on issues related to intellectual honesty and academic and professional conduct during orientation week. This is done through a presentation and supplemented with written materials including the PA Program Student Handbook and the SU Student Honor Code. This material is reinforced in PA-610 during the bioethics module. The program has encountered infrequent infractions related to professionalism; none requiring severe sanctions (e.g. dismissal).

Humanities for the PA Profession (PA-610) contains a ten hour module on cultural issues. “Multicultural opportunities” was identified as one of the strengths of the didactic curriculum. For example, over the past three years, the PA Program has offered a one-week interdisciplinary
medical mission trip to Nicaragua with faculty and physician supervision. Last year, 29 PA students participated in the trip. This experience was rated high by students and the faculty are investigating ways to formally incorporate it into the curriculum (e.g. as an elective course) to increase financial aid opportunities and help with other funding issues.

The SU Program does not offer its curriculum at a remote (satellite location) or via different means for some students.

**B2 Basic Medical Sciences**

Basic science preparation is addressed through prerequisite courses and the PA program curriculum. Basic science prerequisites are outlined in the Admissions Guidelines and include the following: Anatomy & Physiology (2 semesters), Chemistry (2 semesters, with one being Biochemistry), and Microbiology (1 semester). Prerequisite science courses, except biochemistry, must include a laboratory component, which must have been taken within ten years, and completed with at least a C grade. Since the last site-visit, Genetics was deleted as a pre-requisite due to the ARC-PA requirement that it be included within the program curriculum.

Basic science courses within the PA curriculum include Medical Physiology and Genetics (3 credits), Anatomy for Physician Assistants (6 credits - an increase of one credit and resequencing over two semesters since last visit), Neuroanatomy (3 credits) and Clinical Pharmacology (4 credits - an increase of one credit since last visit). The Anatomy course includes a cadaver laboratory experience that was initially primarily prosection based; but as a result of faculty and student feedback, the credit hours were increased and an additional lab section was added to accommodate dissection opportunities and better integration with the physical therapy students. While there are still some concerns by students that the anatomy course is too musculokeletal focused, the overall feedback has significantly improved and the merits of the interdisciplinary model works effectively.

Pathophysiology is not included as a specific course within the PA program, however it is addressed sufficiently through integration within the curriculum; primarily in the clinical medicine courses. For example, when the topics of cardiac examination and heart murmurs are presented, a discussion of cardiac pathophysiology is included to provide a foundation for the understanding of the other aspects of the presentation. This reflected in the objectives for clinical medicine and other relevant courses. In 2005, the faculty recommended that a Medical Physiology course be developed and offered early in the curriculum in order to provide a consistent foundation among students. It was found that students were struggling with pathophysiology concepts because their undergraduate preparation was inconsistent. In addition, they recommended that a module in the area of genetics be added to the Medical Physiology course in order to achieve compliance with the new Standards.

In Spring 2004, the Functional Neuroanatomy course was increased by one credit hour from 2 hours to three. This was done primarily to ease stress of offering a large body of complicated material in a short time frame. Feedback from students is that the course is better paced.
Another concern that had emerged frequently on student evaluations in the past was that the Pathophysiology (now Medical Physiology and Genetics) course was too focused to the physical therapy profession. This may have been related to the background of the instructor and that the course was offered on an interdisciplinary basis with PT students. In 2006, when the curriculum was revised, the program director was able to negotiate with the Dean of Arts & Science, the release of one of the biology department faculty members to teach the course and it now is a physician assistant focused course.

Finally, feedback from students from students has been consistent regarding the sequence of the Clinical Pharmacology course, which is currently offered during a ten-week summer session. Students feel that the complexity of the material would lend itself better to a 15 week term. Since the last visit, the contact (and credit hours) were increased by 15 hours (1 credit) to allow for decompression of the course content. Until 2008, the Pharmacology course was taught primarily by adjunct faculty and guest lecturers from the School of Pharmacy. Now that the PA Program has a dedicated pharmacology faculty member, resequencing of this course and better integration is feasible. The program anticipates forwarding a curriculum revision recommendation to the University Curriculum Committee next year. Nonetheless, the Clinical Pharmacology and Therapeutics courses have been effective in preparing students for clinical rotations.

The benchmark established for end of course evaluations is 3.50. Medical Physiology evaluations have reflected a downward trend. The instructor for this course is a basic scientist new to education and even with mentoring was unable to garner the support of students. Peer evaluations were conducted and demonstrated that the faculty member was knowledgeable but did not appear self confident. This individual was recently hired by the SU School of Pharmacy and a new instructor will be assigned in Fall of 2009.

Table 3. Summary Scores for Basic Science Course and Instructors 2006-2008*

<table>
<thead>
<tr>
<th>Year</th>
<th>Anatomy Course</th>
<th>Anatomy Instructor</th>
<th>Medical Physiology Course</th>
<th>Medical Physiology Instructor</th>
<th>Neuroanatomy Course</th>
<th>Neuroanatomy Instructor</th>
<th>Pharmacology Course</th>
<th>Pharmacology Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>3.51</td>
<td>3.87</td>
<td>3.82</td>
<td>3.93</td>
<td>4.39</td>
<td>4.57</td>
<td>3.81</td>
<td>3.81</td>
</tr>
<tr>
<td>2007</td>
<td>4.30</td>
<td>4.45</td>
<td>3.51</td>
<td>3.46</td>
<td>4.1</td>
<td>4.53</td>
<td>4.31</td>
<td>4.5</td>
</tr>
<tr>
<td>2008</td>
<td>4.16</td>
<td>4.38</td>
<td>3.34</td>
<td>3.45</td>
<td>4.33</td>
<td>4.59</td>
<td>3.40</td>
<td>3.41**</td>
</tr>
</tbody>
</table>

* average scores on 5 point Likert scale  
** instructor’s first year teaching

B3 Clinical Preparatory Sciences

Review of didactic curriculum revealed that there are no significant gaps between the expectations for the clinical preparatory sciences as outlined in the Standards and what is offered by the SU PA Program. Information on where topics listed in the B3 Standards are found in specific SU courses is provided in the Application on pages 18-20. Core PA faculty serve as the primary instructors for the courses dealing with patient interviewing, medical history taking, physical examination and diagnostic studies (ordering, performing and/or interpreting). The courses dealing with this content all have laboratory components where students are provided directed practice and evaluation of psychomotor skills. The patient evaluation course (PA-516) addresses examination techniques and findings across the life span. The Diagnostic and Therapeutic Skills course provides instruction and practice for technical procedures such as
Suturing, venipuncture, and catheterization. Mannequins, pigs’ feet and other devices are used to make the learning situation realistic. Students are not permitted to practice invasive skills on one another due to safety concerns. However, a half-day phlebotomy skills experience is provided in outpatient clinics, and the program utilizes the Johns Hopkins University’s standardized patient program for teaching breast, gynecologic, male genitalia and prostate examination skills. A list of technical procedures taught in the program is found in Appendix B. This is reviewed and updated annually.

The PA Program utilizes a two-pronged approach for teaching pathology of organ systems, diagnosis and management (including all phases of care such as acute, chronic etc.) of disease processes. In the courses, Clinical Medicine I (PA-522); Emergency Medicine and Surgery (PA-524); Obstetrics, Gynecology and Pediatrics (PA-580) and Behavioral Medicine (PA-582) a disease approach is primarily used. For example, lecture topics will include Congestive Heart Failure, Myocardial Infarction, Acute Abdomen, or Depression. In order to focus on the critical thinking and problem solving aspects of medicine, the courses Clinical Medicine II (PA-642) and Clinical Therapeutics (PA-640) are integrated and are taught primarily in a small group, case-based and symptom based format. The integration allows students to move from diagnosis (Clinical Medicine II) to applied pharmacology (Clinical Therapeutics) for the management of the cases presented in the courses. These courses provide an in-depth pre-clinical opportunity to develop management plans, which include diagnostic, therapeutic (pharmacologic and non-pharmacologic), referral, and patient education components. Patient education is also a primary focus in Health Promotion and Disease Prevention Strategies (PA-612). Students are taught the basics of presenting patient data in both oral and written forms in Principles of Interviewing and Patient Interaction (PA-514) and these skills are reinforced throughout the curriculum.

The self-study process revealed that although instruction in rehabilitative patient care was provided in some areas such as cardiac rehabilitation (e.g. post MI) and post-operative care, the curriculum would be enhanced expanding this topic to include more of an interdisciplinary approach. For example, a case-based review of spinal cord injury or stroke involving the disciplines of occupational therapy, physical therapy and speech. A pilot was developed and will be offered as part of the University’s Creative Scholarship Day in March 2009. In addition, objectives were developed and instruction incorporated into PA-522 and PA-524.

Evaluation and management of life threatening situations is a primary focus for the course Emergency Medicine & Surgery (PA-524). Students are required to take and pass Basic Life Support (BLS) and Advanced Cardiac Life Support (ACLS) training programs as prerequisites for entering the clinical phase of the program. The BLS and ACLS training are offered through the Winchester Medical Center and Ms. Carlson serves as part of the ACLS faculty.

While there is no identifiable lecture or module in the curriculum dealing with referral of patients to other health care providers or agencies; this area is discussed extensively when addressing management of patients in all clinical preparatory science courses. In addition, one of the course assignments for PA-612 is to identify a federal, state or a local community resource that can be used for patient referral. The students are required to develop a report and post it on Blackboard for other students to review. Key components of the reports include: services provided,
eligibility, cost, ease of access (including physical access to the facility) and perceptions as a potential consumer.

A variety of pedagogies are utilized during the didactic phase of the program in order to enhance active learning and problem solving. These include:

- Lecture and discussion
- Reading assignments
- Writing assignments (H&P, research papers)
- Student presentations (group and individual)
- Small group problem solving
- Videotaping and self-critique
- Demonstration and directed practice
- Journal article critiques

End of course evaluations for the didactic phase have been relatively favorable and with few, sporadic exceptions, have met the benchmark of 3.50. These are further detailed in section C. Unfortunately, the PAEA has not conducted a curriculum content survey since the 19th Annual Report (2002-03). This was done in the 2004 SSR and it was determined that the SU PA Program had fewer contact hours in clinical medicine when compared to national averages. Since then, the contact hours in Clinical Medicine (I&II) were increased by thirty. Because national comparison are not current, it was determined that benchmarking would not be done for this self-study.

B4 Behavioral and Social Sciences

Information on where topics listed in the Standards are found in specific SU courses is provided in the Application on pages 18-20. The Didactic Self-Study Committee (DSSC) found no gaps in the area of Behavioral and Social Sciences between the Standards and the SU PA Program curriculum. The content areas for B4 are addressed primarily in the courses, Health Promotion & Disease Prevention, Humanities for the PA Profession (includes module on end of life issues), and Behavioral Medicine.

B5 Information Literacy

Instruction on use of clinical research for decision-making, interpretation of medical literature and use of resources to stay abreast of the literature is well integrated throughout the curriculum. Students are first provided a foundation in research methods, statistics and epidemiology in PA-512 offered in the first semester. This course includes instruction on understanding various research methods, how to access the literature through the SU library database and other web tools, how to look for threats to validity or reliability, and the components of a research study. In January 2007, the PA Program contracted with Connie Goldgar and Dave Keahey of the University of Utah to provide an on-site one and one-half day workshop (with Category I CME credit) on Evidence Based Medicine (EBM) to the PA Program faculty. Since then, the program has integrated EBM concepts into Clinical Medicine II, provided presentations on EBM concepts to students during the clinical year seminars and have allowed EBM projects for the scholarly
project. The skills and knowledge related to information literacy are reinforced in courses such as Clinical Medicine and applied in the courses Scholarly Project I and II where the student (under the guidance of a faculty advisor) is required to develop and implement an original research project or write a clinical review article. An evaluation at the end of the scholarly project for the past two years indicates that in general, the process was viewed favorably (e.g. 88% agreed or strongly agreed that the interactions with their advisor was positive). To date, three student works have been accepted for poster presentations at national PA meetings and one student's paper was a winner in the AAPA student writing competition. Because some students see the scholarly project as detraction from their PA studies and do not see the relevance to clinical practice, the program does not expect results from this survey to be overwhelmingly positive. Nonetheless, opportunities for enhancement have been identified including redesign of Blackboard materials, improving advisor accessibility and feedback, requiring students to maintain the negotiated schedule. A detailed report will be available on-site.

**B6 Health Policy and Professional Practice**

Information on where topics listed in the Standards are found in specific SU courses is provided in the Application on pages 18-20. The Didactic Self Study Committee (DSSC) found no gaps in the area of Health Policy between the Standards and the SU PA Program curriculum. However, the DSSC identified as potential weakness, the area of reimbursement, coding, and referral processes. The faculty determined that although the topics of reimbursement and coding are fully covered in PA-510, students need to have these topics reinforced during the second year. Therefore, an additional session was incorporated into the end of rotation (EOR) seminar during June 2008. This presentation was well received and the students suggested that it be moved earlier in the EOR schedule for the following year. Coding and referral are reinforced in Clinical Medicine II (PA-642) assignments and throughout the clinical year through the Typhon logging.

The primary curricular vehicle for presentation of professional practice issues is the course Physician Assistant and Health Care Dynamics (PA-510). This course provides students with a historical foundation for the profession, review of current trends and issues, (re)certification, credentialing, accreditation, liability, and political/legal issues. The location of the program and professional contacts of the program director have permitted students access to key leaders and AAPA staff members. For example, guest lecturers in this course have included: James Cawley, (co-author of Physician Assistants in American Medicine) and Past-President of PAEA and AAPA staff member, Bob McNellis.

Due to the fairly rapidly evolving nature of legal and political issues in the PA profession and the fact that PA-510 is offered in the first semester, some of the material is offered again during end of rotation seminars as the students get close to graduation. For example, during the Contract Negotiations lecture typically is offered a few months before graduation. Licensure, certification and liability issues are re-reviewed and updated in the context of the topic.

The dependent yet complementary relationship between PAs and the supervising physician is discussed as early as open house sessions for PA candidates and reinforced throughout the curriculum through lecture, role modeling and clinical phase policies.
B7 Supervised Clinical Practice

The clinical phase of the Shenandoah University PA Program consists of 46 weeks of clinical rotations. This program has a primary care orientation that is reflected in the type and length of each component of the clinical curriculum. Graduate and preceptor data have suggested that the curriculum is effective in preparing students for clinical practice as a physician assistant. Policies and practices that ensure sites provide effective teaching and evaluation are elaborated below in section C4.

The average number of weeks of clinical experience as reported in the PAEA 19th Annual Report is forty-five. The average number of weeks for elective experiences nationally is 6.9 whereas for SU it is four. Clinical experiences on the whole are fairly consistent between SU and other programs except for family medicine and electives. However, it is possible that programs may offer additional family medicine in lieu of a clinical preceptorship which is primary care oriented. Unfortunately, national benchmark information on clinical curriculum has not been updated since 2003 so the comparisons listed below are somewhat dated.

**Table 4. Comparison of Clinical Rotation Length, Type and Credits**

<table>
<thead>
<tr>
<th>Type</th>
<th>SU Length</th>
<th>National Average Length</th>
<th>SU credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Medicine</td>
<td>6</td>
<td>8.9</td>
<td>3</td>
</tr>
<tr>
<td>Surgery</td>
<td>6</td>
<td>4.9 (General only)</td>
<td>3</td>
</tr>
<tr>
<td>Internal Medicine</td>
<td>6</td>
<td>6.5</td>
<td>3</td>
</tr>
<tr>
<td>Emergency Medicine</td>
<td>6</td>
<td>4.7</td>
<td>3</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>6</td>
<td>5.3</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>4</td>
<td>6.9</td>
<td>2</td>
</tr>
<tr>
<td>Obstetrics/Gynecology</td>
<td>2</td>
<td>4.7 (includes Gyn)</td>
<td>1</td>
</tr>
<tr>
<td>Community Preceptorship</td>
<td>10</td>
<td>9.4</td>
<td>6</td>
</tr>
</tbody>
</table>

Through the experiences outlined above, students receive supervised clinical practice experiences with patients across the life span. Although students do not have a specific clinical experience in titled geriatric medicine, expectations are outlined as objectives for other clinical rotations, and students obtain this exposure through other clinical experiences. Based on Typhon data completed by Class of 2008 students, 100% indicated that they were provided exposure to geriatric patients in Family Medicine, Internal Medicine and Emergency Medicine rotations. Nearly 83 percent of the students also logged geriatric patient clinical encounters during their elective and 96.5 percent during their community preceptorship. In addition, the PA Program recently initiated a project with the Shenandoah Area Agency on Aging (SAAA) that is described below. All of the emergency medicine, family medicine, internal medicine and surgery sites provide exposure to the geriatric population.

Another area in which the SUPA Program does not have a specific clinical rotation but integrates the objectives in other clinical rotations is the care of patients with behavioral and psychiatric conditions. During the self-study process, the clinical phase sub-committee reviewed Typhon
data from the Class of 2008. They were able to document through the ICD-9 codes that all
students had clinical encounters with patients experiencing psychiatry/behavioral conditions. A
total of 56 disorders were captured via Typhon, the most common as expected, being anxiety
disorder and depression. Review of graduate survey and PANCE scores have reinforced that
students are receiving sufficient didactic and clinical instruction in psychiatry/behavioral health.

Throughout the clinical year and a portion of the didactic year, students practice in a variety
of patient care settings. The SUPA Family Medicine, Pediatrics and Community Preceptorship
rotations are primarily outpatient based - nearly 48%. Surgery (13%) is a combination of
inpatient and operating room experience. All students receive a six-week emergency medicine
(13% of the total experience) and all receive a 2-week experience in obstetrics/gynecology,
which includes prenatal care (4%). In addition, analysis of Typhon data reveals that students
will experience women's health issues/conditions in a variety of other clinical rotations (e.g.
Emergency Medicine, Family Medicine and Community Preceptorship). Internal medicine
clinical experiences may be primarily inpatient or outpatient. It has been a trend for local
internists and family medicine physicians to not seek hospital privileges with the advent of the
hospitalist profession. This has had an impact on the clinical education of students and the
program is examining mechanisms to ensure a consistent inpatient experience for all students.
Nonetheless, examination of Typhon data has revealed that students in the Class of 2008, all had
inpatient experiences during the clinical year - averaging 9.59% of all encounters. On average,
each student has the opportunity for experience in an inpatient setting in 3 of 7 seven rotations
(excluding emergency medicine). Elective rotations (8.6%) may include outpatient, inpatient or
surgical experiences.

The SU PA Program continues to be challenged by the (should) requirement to provide clinical
experience in long-term care (LTC). Two major issues impact the deployment of students in
these settings in our community. The first is that while there certainly long-term care facilities
with adequate patient populations, there is little physician or PA supervision available on a
regular basis. Second, both in the rehabilitation and geriatrics community, there is a drive for
early discharge and supplemented by home care versus institutionalization. For this reason, the
PA Program (with federal grant support) has initiated a project where students are conducting
assessments of the elderly during home visits. This approach is supported the adoption by the
program of the definition of LTC promulgated by the US Department of Health & Human
Services which reads:

Long-term care is a variety of services that includes medical and non-medical care to
people who have a chronic illness or disability. Long-term care helps meet health or
personal needs. Most long-term care is to assist people with support services such as
activities of daily living like dressing, bathing, and using the bathroom. Long-term care
can be provided at home, in the community, in assisted living or in nursing homes.
USDHHS: http://www.medicare.gov/LongTermCare/Static/Home.asp

The project was initiated with the Class of 2008 during Fall Semester 2008 with students in
groups of three completing comprehensive assessments and drug histories during two home
visits. It will be expanded this year to add at least one more visit and a didactic component. A
detailed explanation of the project with goals and objectives will be available for the site visit
team. Typhon data has demonstrated that in addition, some students also experience long term
care experiences during the clinical year - 38 encounters by 6 students. We are still exploring ways to ensure that these data are captured accurately.

The clinical coordinator and her staff ensure that all of the clinical preceptors have the appropriate credentials. When a clinical training site is being considered for utilization, an assessment is conducted using the Clinical Site Profile & Information form. Physician preceptors provide credentials including board certification and licensure. Physician assistants, nurse practitioners and nurse midwives must be certified. A credential check is completed by reviewing medical board websites. This also reveals any board sanctions, malpractice concerns and the like. In past three years there have been three sites where an affiliation agreement was not pursued because of concerns identified through this process.

Beginning in 2006, the PA Program moved from paper logging of patient encounters and procedures to electronic logging (Typhon). Up until January 2008, students were required to log encounters only every other day. It was felt that the sampling would be adequate for data analysis and would increase student compliance. However, over time and during the self-study process, it was discovered that the clinical data collection system was in need of enhancements including use of Typhon to capture attendance, procedures and all patient encounters. As a result, Typhon is integrated more fully into the clinical year and the window for data entry has been narrowed from 30 to 7, in order improve compliance and accuracy.

Section B - Strengths:

- The didactic and clinical curricula appear to be very effective at preparing students for the profession as evidenced by above national average PACKRAT scores, a five year PANCE rate consistently above the national average (see Appendix J) and strong placement of graduates.
- The PA Program has implemented data driven curricular changes that have enhanced the education of the SU PA Program students.

Section B - Areas Needing Improvement:

- The basic science curriculum would be enhanced by moving Clinical Pharmacology to a 15 week semester allowing for further decompression and integration with Clinical Medicine and other clinical preparatory courses.
  - Dr. Trompeter will prepare a curriculum proposal for submission to the University Curriculum Committee in 2009 for implementation in 2010.
- Course/instructor evaluations for less experienced faculty are less than benchmark (e.g. in PA-504).
  - Formal faculty development activities have been initiated (e.g. PAEA Basic Skills Workshops) as well as mentoring. Improvements have been noted already when faculty member has opportunity to teach the same course in subsequent years. Peer evaluations are typically more favorable and objective than student evaluations and will continue to be utilized. The appointment of an Associate Director for the program will provide more "hands-on" involvement with adjunct faculty.
• Didactic year clinical experiences should be expanded to offer students earlier exposure to patient care and the clinical environment as well as to reinforce classroom learning.
  o The program has gradually added additional experiences each year but a set-back occurred with the resignation of the clinical coordinator in early 2008. Many first year students (approximately 20 annually) participate in the Nicaragua mission trip. A federal grant supports student clinical experiences with the elderly through a cooperative agreement with the Shenandoah Area Agency on Aging. In Fall 2008, students from the Class of 2009 conducted comprehensive assessments during two home visits. This project will be expanded for the Class of 2010. The program anticipates adding other didactic year clinical experiences.
• The Program continues to explore and implement enhancements to the Typhon clinical tracking system in order to validate the variety of exposures to clinical cases and procedures.
• The program needs to explore additional mechanisms to augment the home visit project with SAAA which we have determined meet long-term care exposure.

Section C: Evaluation

C1 Program Evaluation

The DPAS developed and since inception, has implemented a formal self-evaluation process that provides for continuing, systematic review of the effectiveness of the educational program and compliance with the Standards. These processes are described above and outlined in the Outcomes Assessment Plan, which is provided in Appendix I1. The Director assumes responsibility for ensuring that the evaluation plans are carried out. An Outcomes Binder is maintained in the Director’s office and electronically on a network drive with examples of instruments used for evaluation and assessment results. The Program evaluation and outcomes assessment processes have resulted in both curricular modifications as described elsewhere in this document and improved program policies and processes to enhance the effectiveness and efficiency of operations and the quality of instruction.

C2 Educational Effectiveness

The Program collects and analyzes both qualitative and quantitative data regarding student and graduate outcomes. Since the graduation of the charter class in December 2003, the Program has collected and analyzed data, and implemented curricular and programmatic modifications as needed. Findings and analysis for each of the key areas listed in the Standards (C2.2a-g) are summarized below.

Student Attrition, Deceleration, and Remediation (C2.01b1)

Table 5: Student Attrition and Deceleration 2006-10

<table>
<thead>
<tr>
<th>Class</th>
<th>Matriculated</th>
<th>Graduated On-time</th>
<th>Graduated All</th>
<th>Attrition Rate (%)</th>
<th>Withdrawal Personal</th>
<th>Withdrawal - Academic</th>
<th>LOA</th>
<th>Deceleration</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>16</td>
<td>14</td>
<td>15</td>
<td>6.25</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>2004</td>
<td>24</td>
<td>18</td>
<td>18</td>
<td>25.0</td>
<td>2</td>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2005</td>
<td>26</td>
<td>19</td>
<td>19</td>
<td>26.9</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Year</td>
<td>Admits</td>
<td>Non-candidates</td>
<td>Graduates</td>
<td>Attrition Rate</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------</td>
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<td>-----------</td>
<td>----------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>32</td>
<td>27</td>
<td>7</td>
<td>15.6%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>36</td>
<td>29</td>
<td>7</td>
<td>13.9%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>37</td>
<td>30</td>
<td>7</td>
<td>18.9%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>36</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>40</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Only new admits
2. Calculation: # non-graduates/# matriculated
3. Includes 3 students currently on-track to graduate Dec. 2009

The level of attrition among students has been a concern. The average attrition rate for the years 2003-08 is 17.65%, which is higher than the 4.9% and 6% reported nationally by the PAEA in 2007 and 2006 respectively. When examining the data as percentages, there is some artifact effect when comparing a small class of the program to national data. Of the 247 students admitted to date, 19 (7.69%) left for academic reasons, 16 (6.48%) withdrew for personal reasons, 73 (29.44%) are still in progress, and 2 (0.81%) are currently on leave of absence. A more detailed analysis of attrition will be available for review by the on-site review team and includes a complete demographic profile for each person who has been decelerated or did not complete the program. The faculty have been surprised that the attrition rate has not decreased in the face of increasing average undergraduate overall and science GPAs for incoming classes (see Figure 2).

While there is no one class that is responsible for failures, it appears that underpreparation in the basic sciences has contributed to academic dismissals in general. Therefore, beginning in 2006, the program increased the bar for undergraduate science GPA on admissions from 2.50 to 2.75 and in subsequent years gradually increased it to its current level of 2.90. In addition, the program has initiated an analysis of undergraduate preparation of candidates from some of our primary feeder schools. Currently, the results are inconclusive.

**Figure 2. Trend Analysis for GPA**
The Program first participated in CASPA for selection of the Class of 2005 and this resulted in a significant increase in the quality and quantity of the applicant pool. It is expected that with continued participation and increased visibility of the SU Program, the grade point average and academic preparation of the admitted students will continue to show an upward trend. Nonetheless, the program will continue to be aggressive in securing assistance for students who are struggling academically. Examples of interventions include: free tutoring for anatomy and other courses, prompt referrals for struggling students to PA faculty advisors and the SU Academic Support Services, deceleration when that strategy is determined to be appropriate by the program director. In addition, the program has added three presentations to orientation week: "Improving Study Skills," "Test-Taking Skills," and "How to Succeed in the PA Program." The first two are presented by the director and the third by a student who has been successful in the didactic phase. For three years, the program administered a basic science comprehensive assessment examination during orientation but analysis revealed that it was not predictive of success in the didactic phase of the program and it was discontinued.

The attrition table above also reveals that a number of withdrawals are linked to personal reasons for which the program has no control. Examples include, changes in spouse's employment, homesick and military deployment overseas.

Faculty Attrition (C2.01b2)

As described above, the program has a faculty attrition of two (core faculty) since its last site visit and has added 1.5 core faculty. In both cases, the faculty members left for personal, not performance reasons (promotion to Associate Director in another program and return to clinical practice). As reported in the 23rd Annual Report, (2006-2007), 103 individuals in the personnel categories of I-III (faculty) departed PA programs during 2005-06 (20 year mean = 69.3). On average, PA Programs lost 1.45 individuals during this time period (14.2% attrition rate). Since the last visit in 2004, there have been only two instances of faculty attrition making our five year average 0.4; much better than the 20 year national rate of 0.9. Although, the SU Program lost only two positions, there is always significant impact because energies are diverted to recruitment and selection efforts, and training of replacements. Nonetheless, during the past five years, the program was fortunate to secure outstanding replacements, expand our faculty and staff, and continue a track record of quality instruction. This report did not factor in a special nine-month visiting professorship held by Dr. Patricia Ragan, and a temporary grant-funded 0.5 position held by Rebecca Redman, PharmD. Dr. Redman left due maternity leave. The position was moved to institutional funding in 2007. As noted above, Mr. Eifel has announced his intention to leave the PA Program at the end of May 2009 and a search is underway.

Student Failure Rates of Individual Courses, Clinical Rotations or Faculty (C2.01b3)

There has been no faculty member, course, or clinical experience identified as having a greater proportion of failing (or even low) grades. Generally, students were dismissed, have been unable to achieve academic success due to marginal grades in more than one course and insufficient grade point averages over two or more semesters. As illustrated in the table below, there is no pattern of failures or low grades that can be attributed to a particular course. Data for the years 2003-05 will be available for review for the on-site evaluators.
### Table 6: Failure Rates by Course 2006-2009

<table>
<thead>
<tr>
<th>Course</th>
<th>“F” Grades by Year</th>
<th>“D” Grades by Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pathophysiology (PA-502)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anatomy I (PA-503)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anatomy II (PA-505)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prin. Epid. Research &amp; Statistics (PA-512)</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Diagnostic &amp; Therapeutic Skills (PA-518)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emergency Medicine &amp; Surgery (PA-524)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical Medicine I (PA-522)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neuroanatomy (PA-672)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family Medicine Clinical (PA-626)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scholarly Project 1 (PA-660)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Student Evaluations of Courses, Clinical Experiences and Faculty (C2.01b4)**

Students are requested to complete a survey that assesses their impressions of both the course and the instructor/course coordinator at the end of each semester. In the past, the survey was completed confidentially and forwarded to the Office/Data Manager who compiled the numerical ratings and entered the comments into a word processing document. The evaluations were forwarded to the Director after final grades were submitted and the Director forwarded the evaluations to the instructor/course coordinator.

Two years ago the University decided to standardize the course/instructor by contracting with "Online Course Evaluations" a web based firm. With the new process, after course grades are submitted, evaluations are directly accessible to the faculty and to the director. Initially, response rates on this format were poor but have increased after a period of adjustment. In addition, special evaluations are conducted for scholarly project and clinical courses because of the need to ask questions relevant to the pedagogy.

In cases where there are low ratings or significant concerns, the Program Director will meet individually with the instructor to review the evaluations and discuss improvement strategies. Although a faculty development approach is used to improve ratings, in two cases, an adjunct faculty member (Anatomy, Spring 2002; Medical Physiology, Fall 2008) were not rehired due to poor performance and evaluations. Student scores, and in particular, comments are used by the program for curriculum review and revisions. However, these data are not used in isolation because student perceptions regarding rigor, teaching style, difficulty of course exams and assignments are impacted by a number of factors (e.g. grades) and may change over time when they have an opportunity to apply concepts in the clinical environment.

Student evaluation of clinical experiences and preceptors is addressed in section C5. Course and evaluation reports (didactic phase) for the past three years as well as detailed summaries will be available for the on-site reviewers but are summarized below. In all cases, the program faculty have met the overall benchmark of at least 3.5 as specified in the Outcomes Assessment Plan.
Graduate Evaluations of Curriculum and Program Effectiveness (C2.01b5)

The charter class of SU PA Program graduated on December 13, 2003. Graduate survey have been conducted on an annual basis. Planning documents for the DPAS indicate that graduates will be surveyed six months after graduation. This allows sufficient time for graduates to secure employment, certification and licensure. Over the past two years, the program has used an on-line survey method (formsite.com) and has revised the survey instrument to obtain primarily program evaluation data. This is due in part the accessibility of AAPA census data on salaries, benefits, other practice profile data and demographics.

The most recent data were obtained from the Class of 2007. This survey was open April through July 2008. There were 25 respondents on the web-based survey and an additional 4 chose to respond on a paper survey following extensive follow-up via email and phone. This yielded a 97% response rate. The survey consisted of three parts. In part one, the graduates were asked to rate the program's effectiveness relative to knowledge and skills preparation in both the didactic phase and clinical phase of the curriculum on a Likert scale. In part two, graduates were asked to evaluate their own skill levels and part three consisted of a series of demographic and practice profile questions. Twenty-six of the 29 were employed full-time as physician assistants, one in a PA post-graduate program, one unemployed (maternity reasons), and one employed part-time.

Overall, most graduates rated the preparation (didactic and clinical) as effective (agree or strongly agree). Areas in which there were more than two persons responding disagree or strongly disagree were minimal but included: developing a diagnostic management plan - didactic (3), using/prescribing pharmacotherapeutics-didactic (13), using/prescribing pharmacotherapeutics-clinical (4), patient/family counseling/education-didactic (3), performing technical/clinical skills-clinical (3), exercising administrative/management skills-didactic (9), exercising administrative/management skills-clinical (8), providing professional/community education-didactic (4), providing professional/community education-clinical (7), assisting in surgery-didactic (13), and assisting in surgery-clinical (3).

Analysis of the findings indicates a concern primarily with pharmacology and therapeutics and surgical skills development. Comparing the graduate results to the preceptor survey results indicates some consistency of findings with 36% indicating knowledge of pharmacotherapeutics as poor (12%) or acceptable. Preceptors were not asked to rate surgical skills specifically but none rated clinical skills as poor and only 24% as acceptable; the remainder (approx. 78%) as very good to excellent. This class had an adjunct instructor for the pharmacology course which may partially explain the results. Poorer ratings for surgical skills may be a reflection of the primary care orientation of the program but requires further analysis including trend analysis after Class of 2008 results are obtained. The survey instrument used in 2007 was revised to

<table>
<thead>
<tr>
<th>Course</th>
<th>Class of 2007 (four semesters)</th>
<th>Class of 2008 (four semesters)</th>
<th>Class of 2009 (four semesters)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4.16</td>
<td>4.08</td>
<td>4.03</td>
</tr>
<tr>
<td></td>
<td>4.27</td>
<td>4.13</td>
<td>4.08</td>
</tr>
<tr>
<td></td>
<td>4.22</td>
<td>4.10</td>
<td>4.06</td>
</tr>
</tbody>
</table>

Note: Likert Scale: 5 = Strongly Agree and 1 = Strongly Disagree
obtain more detailed information therefore retrospective trend analysis will be less instructive. Nonetheless, the results in these two areas in 2006 was examined. The response rate for the Class of 2006 was poor (13/27) but 23% indicated that the preparation for surgical skills was inadequate and 15% indicated that preparation for developing a therapeutic plan.

Because of the expansive content area of pharmacology and the diversity of clinical rotation experience, in our experience, graduates will not be fully comfortable with this area until they settle in to a specific practice with a defined formulary. Nonetheless, the ratings are consistent with faculty concerns about the pharmacology curriculum. With the recent hire of a dedicated pharmacist, the program will be able to better integrate pharmacology and therapeutics and decompress the summer semester clinical pharmacology course.

The program is less concerned with the lower ratings on administrative/management skills as these skill sets are not essential to the primary mission of the program. It may require us to re-examine that as a goal. The lower ratings in the area of patient counseling and patient education are a concern. There is a two-credit course in Health Promotion and Disease Prevention but analysis of the data from this survey will require more qualitative data to determine the specific areas where students feel deficient.

The Program also conducts a comprehensive but fairly general end-of-program survey of students during the week prior to graduation. The results of the survey for the three most recent classes indicate overall satisfaction with the program, a general impression that the program is achieving its mission, and comments consistent with end of course/instructor surveys. Overall ratings for the class of 2006 were lower but there was a relatively low response rate related to first the first use of an electronic version of the survey and timing so it is difficult to determine trends.

<table>
<thead>
<tr>
<th>End of Program Survey - Key Questions</th>
<th>2006 (n=15/27)</th>
<th>2007 (n=29/29)</th>
<th>2008 (n=23/27)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall, the program challenged me</td>
<td>3.60</td>
<td>4.55</td>
<td>4.61</td>
</tr>
<tr>
<td>Would recommend the PA Program to others</td>
<td>3.13</td>
<td>4.17</td>
<td>3.91</td>
</tr>
<tr>
<td>If had to do over, would attend this program</td>
<td>2.87</td>
<td>4.14</td>
<td>3.39</td>
</tr>
<tr>
<td>Overall, the program prepared me well</td>
<td>3.60</td>
<td>4.45</td>
<td>4.13</td>
</tr>
<tr>
<td>Average ratings on mission/core value ratings</td>
<td>3.56</td>
<td>4.51</td>
<td>4.18</td>
</tr>
</tbody>
</table>

Likert Scale (5 = SA, 1 = SD)

Students at the end of the program were also asked to rate the general areas of program aspects and effectiveness of courses in the didactic curriculum in preparing them for clinical rotation or employment. The table below identifies any areas where the program did not achieve its self-determined benchmark of 3.5. Shaded areas indicate where benchmarks were achieved or exceeded in at least one of the comparison years. Although, the program's benchmark is 3.5, there is more concern when a pattern of low scores is apparent or marks are less than 3.0. Some courses consistently are rated lower than others. These tend to be the courses that students perceive as not as related to their vision of clinical practice such as the research course, humanities (ethics, cultural competence), health promotion/disease prevention, and behavioral
health. End of rotation seminars and testing also have tended to receive lower marks in spite of continuing efforts to ensure their relevancy.

Table 9: End of Program Survey, Areas Failing to Achieve Benchmark

<table>
<thead>
<tr>
<th>General Areas</th>
<th>Class of 06*</th>
<th>Class of 07</th>
<th>Class of 08</th>
</tr>
</thead>
<tbody>
<tr>
<td>Courses sequencing appropriately</td>
<td>2.80</td>
<td>3.72</td>
<td>3.65</td>
</tr>
<tr>
<td>Post rotation seminars</td>
<td>3.07</td>
<td>3.48</td>
<td>3.04</td>
</tr>
<tr>
<td>Courses effectively organized</td>
<td>3.33</td>
<td>3.72</td>
<td>3.74</td>
</tr>
<tr>
<td>Didactic courses prepared students for clinical yr.</td>
<td>2.53</td>
<td>3.93</td>
<td>3.78</td>
</tr>
<tr>
<td>Clinical experiences consistent with objectives</td>
<td>3.27</td>
<td>3.72</td>
<td>3.87</td>
</tr>
<tr>
<td>Clinical course sequencing</td>
<td>2.87</td>
<td>3.76</td>
<td>3.91</td>
</tr>
<tr>
<td>Clinical experiences planned to maximize pt. contact</td>
<td>3.40</td>
<td>4.03</td>
<td>4.00</td>
</tr>
<tr>
<td>Reading assignments reasonable length</td>
<td>3.60</td>
<td>3.48</td>
<td>2.74</td>
</tr>
<tr>
<td>Clinical exams fair/objective</td>
<td>2.87</td>
<td>3.17</td>
<td>3.04</td>
</tr>
<tr>
<td>Exams provided good feedback</td>
<td>3.20</td>
<td>3.38</td>
<td>3.22</td>
</tr>
<tr>
<td>Faculty dealt with issues fair &amp; reasonable</td>
<td>2.73</td>
<td>4</td>
<td>3.41</td>
</tr>
<tr>
<td>Faculty available for counseling/advising</td>
<td>2.93</td>
<td>4.21</td>
<td>3.64</td>
</tr>
<tr>
<td>Faculty willing and able to help me</td>
<td>2.87</td>
<td>4.44</td>
<td>3.68</td>
</tr>
<tr>
<td>Course coordinators willing to provide assistance</td>
<td>3.33</td>
<td>4.18</td>
<td>3.77</td>
</tr>
<tr>
<td>SU support services helpful</td>
<td>3.53</td>
<td>2.83</td>
<td>3</td>
</tr>
</tbody>
</table>

*First year web –based response rate: 56% response rate (15/27)

Preceptor Evaluations of Student Performance and Suggestions for Improvement (C2.01b6)

The Program’s Outcomes Assessment Plans indicates that preceptor surveys will be conducted biannually. The first survey was conducted in 2008 and 48 surveys were mailed to preceptors who had more than 1 student over the past two clinical years and yielded a response rate of
64.5% (N=31). The average amount of time the respondents were affiliated with the program was 42.7 months (SD=20.72) and precepted an average of 4 students per year. The survey asked preceptors to rate the SU PA Program on the basis of the knowledge and skills of the students they precepted using a modified Likert scale with "excellent" as the highest level and "poor" as the lowest. In addition, there were survey questions that addressed interactions with the program and overall ratings. Most knowledge and skill ratings were at the very good or excellent categories across the board and there were no trends identified to indicate that didactic curriculum modifications were required. However, the lowest overall scores were in the areas of advanced clinical skills (differential diagnosis and developing therapeutic plans) as well as knowledge base regarding pharmacology. Seventy-five percent rated the students' fund of knowledge as very good to excellent and the other 22% as acceptable. As expected, the highest ratings were in the areas of interpersonal relations and professionalism. Twenty-eight respondents (90%) rated the overall quality of the education as very good to excellent. Eighty percent indicated that they would hire an SU PA graduate and 61.3% would give hiring preference to an SU graduate. In general, preceptor survey findings echo those found in end-of-program and graduate surveys as well as the impressions of the faculty. The survey instrument and complete analysis will be available for review by the site visit team.

Evaluation of Certification Exam Results (C2.01b7)

The program reviews pass rates and average scores relative to the national performance on an annual basis. For the past five years, the SU PA Program has consistently had a pass rate on the PANCE above the national rate (see Appendix J). To date (2003-2007), the SU PA Program first-time taker pass rate for 110 graduates has been 98% and 100% overall. For the same time frame, the average overall test scores for SU have been 93-96% of the national average (above the national average in 2003). In addition, the program analyzes the content and task area scores to look for potential areas needing enhancement in the curriculum. Over the past four years (2003-07), there has been only one instance of when the SU PA graduate scores have never been less than 90% of the national scores. The gastrointestinal content area was 89% in 2005 and then increased to 95% in 2006. While the program's goal is to see content and task scores to be consistently at or above the national scores, there does not appear to be any deficiencies based on these data. For the content area of clinical therapy, the results have shown a range of 95-106% of the national scores; contradicting to some extent the perceptions of graduates on the graduate surveys. As of the writing of the SSR, the comparative results on mean scores as well as content and task areas are not available for the Class of 2008, which graduated in December.

Self-identified Program Strengths and Areas Needing Improvement (C2.01c)


Strengths & Areas Needing Improvement

See summary section below.

Program Modifications (C2.01d)

Minor program modifications have been made when appropriate and feasible as a result of the ongoing program evaluation processes. The program strives to ensure modifications are the
result of data driven decision-making that includes all stakeholders. The PA faculty meetings operate on a consensus building basis. Not all program modifications are the result of in depth data analysis. Although curriculum decisions often are only initiated after a complete review of outcome data over time; modifications to policies or processes are often the result of student or graduate feedback, faculty or staff suggestions, or the result of debriefing sessions. For example, the ACLS module was resequenced because of student feedback and to coincide with the PAEA Forum to maximize opportunities for faculty attendance. Because the module is not credit bearing, an official curriculum proposal and revision was not required. Student feedback and other data have suggested other modifications (e.g. resequencing of anatomy and pharmacology courses); but the pharmacology resequencing has been delayed in implementation until the program could have the stability of a qualified pharmacist on core faculty. This occurred last year and curriculum modifications are planned for submission in 2009 and implementation in 2010.

The program not only considers internally generated data but also external opportunities and constraints. For example, the development of the Competencies for the PA Profession by the four professional organizations, stimulated a comprehensive review and revision of the SU PA Program Graduate Competencies. Another example is the ongoing monitoring of the medical literature for newly approved clinical practice guidelines. These are then incorporated into the appropriate areas of the curriculum.

Some modifications were identified above in Section I. Other program modifications resulting from continuous self-assessment and analysis of outcomes include (also see Section I, page X):

- Modifications to the admissions processes as described above.
- Revisions to anatomy labs including moving from a primarily prosection experience to dissection experience and full integration with physical therapy students
- Increased utilization of Blackboard and its tools to enhance instruction
- Offering two courses in Summer One in modular format to facilitate student learning and decrease stress.
- Decreased use of paper documents and increased use of electronic forms for dissemination of information (e.g. placing manuals on thumb drives)
- Increased use of OSCEs in course evaluations to help prepare students for summative examinations.

**Plans for Addressing Areas Needing Improvement (C2.01e)**

See summary section and table below.

**C3 Student Evaluation**

Criteria for successful completion of the program is identified in the Student Handbook and Curriculum Guide. These documents are provided to students at orientation and reviewed with them by the Director. Students sign a document, which is placed in their file, acknowledging that they have read, understood and agree to comply with the policies outlined in the Student Handbook. These documents are available for prospective students as well on the web.
Evaluation methods for each course are described in course syllabi which are provided to each student at the beginning of the course and include type, frequency, relative weight and other relevant information as deemed by the instructor/course instructor. Generally the SU PA Program didactic courses have a minimum of a midterm and final objective written examination. However, the instructor may include a variety of other evaluation strategies as appropriate to the course objectives and overall goals of the program. Other evaluation methods which have been utilized in the SU PA Program include group or individual presentations or projects, oral examinations, article critiques, writing assignments (research type or history/physical examination write-ups), SOAP notes, and practical examinations.

Evaluation strategies for the clinical year are well outlined in the Clinical Manual and vary by type of rotation. However, all rotations include a preceptor evaluation as a major component and all but the Elective rotation include an end-of-rotation examination. Other methods include oral and written case presentations, patient write-ups, patient education project (Pediatrics) and community projects.

Evaluation frequency has been deemed sufficient to provide adequate and timely feedback to students so they remain apprised of their progress in a particular course or the program. On occasion, some faculty members have been delayed in the review and grading of written assignments and this was noted in the end-of-course evaluations. Attempts to correct this situation have been implemented and include revising assignments, creating grading rubrics and use of adjunct faculty as readers/evaluators. Nonetheless, students have high and sometimes unreasonable expectations for quick evaluation of assignments. This area continues to be examined.

As noted above, student performance is a standing agenda item for Division meetings, meaning that this issue is reviewed a minimum of once a month. This process is useful as it allows the faculty as a whole to determine if the problem (academic or behavioral) is course specific, recurring or sporadic. Recommendations are made for intervention, which may include: continue to watch, referral of the student to his/her advisor or the director, increase tutoring, referral to Academic Support Services or referral to the Wilkins Wellness Center for evaluation of health or mental health. While it is desirable to have corrective intervention and positive results before the end of the semester, some students may still end up with academic or professional difficulties which result in probation. Probation is considered a serious warning but permits the student to progress to the next term. This is communicated to the affected students in writing by the program director.

During the clinical year, the students complete a mid-point self-evaluation during each six-week rotation and the 10-week clinical preceptorship that is reviewed by the clinical preceptor and the Clinical Coordinator. In the event that a portion of the evaluation is unacceptable, some type of remediation would be instituted. This will include at least a phone or email contact and often a special site-visit. At the conclusion of each clinical experience, an evaluation of the student is conducted by the primary preceptor for that rotation; this evaluation is also reviewed by the student and the Clinical Coordinator. Both of these evaluations cover cognitive abilities, history and physical exam techniques, clinical competencies, and professional characteristics.
In addition to the preceptor evaluation, an end-of-rotation examination is given to the students (except the elective experience). The purpose of this examination is to assess the students’ knowledge base relative to the cognitive objectives for each clinical area found in the Clinical Manual. It is designed to augment and reinforce the didactic year and reflect the NCCPA blueprint for topics and types of questions. Two years ago, the program changed its requirements for the end of rotation (EOR) examinations. Although the written examinations are factored into the clinical rotation course grade, there is no longer requiring a minimum passing score and remediation with retesting. The rationale for this modification focused on the challenges associated with implementing a complex process when students are sometimes assigned to remote clinic sites, as well as the workload for the clinical coordinator to develop remediation examinations and maintain test security. It was determined that although the exam results are factored into the clinical course grade, it would be treated as a formative examination; allowing the students to use the performance feedback for self-improvement and preparation for the summative examination (PACKRAT).

Although the faculty feel end-of-rotation examinations are valid and linked to learning objectives, students continue to challenge the validity of the EOR examinations as reflected in End of Program and Graduate Surveys. This past year, considerable effort was employed in expanding/revising the test bank and matching questions to both the clinical cognitive objectives and the NCCPA blueprint. Regional coordinators (adjunct instructors) were charged with this task and an estimated 190 questions were added to the bank.

While there has been some controversy on this topic, the SU PA Program utilizes the PACKRAT exams like many other programs, and consider the results to be a useful predictor of PANCE results. The PACKRAT is used as only one component of summative evaluation at the end of the didactic year and at the end of the program. The summative evaluations are augmented by OSCEs to further evaluate student knowledge base, clinical skills and interpersonal skills. In addition composite evaluation of professionalism (attitudinal) is completed by the faculty. For the past five years, the SU PA Program end of didactic year summative PACKRAT scores have been above the national average (by 10.62 points- five year average). In addition, subset average scores on the end of didactic year PACKRAT have been at or above the national scores in all but two instances (hematology and scientific concepts – Class of 2006). For the past 3 years, the SU PA Program has outpaced the national average on the second year (end-of-program) PACKRAT by an average of 14.5 points. In all areas, the subset scores were also above the national averages. Again addressing the validity of using the PACKRAT examination for its summative examination, the SU PA Program faculty are convinced that this examination is superior to a locally developed examination in that avoids internal validity issues and offers national benchmarking. In addition, the SU PA Program has found that the end-of didactic year PACKRAT and end-of-program PACKRAT examinations are consistently moderately correlated to PANCE scores. Students who are unable to meet the benchmark passing scores for summative evaluations are provided opportunities for remediation and retesting. This is described in the Student Handbook.
Table 10, Correlations of PACKRAT and PANCE Scores*

<table>
<thead>
<tr>
<th>Class</th>
<th>End-of-Didactic PACKRAT</th>
<th>End-of-Program PACKRAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>.647</td>
<td>.738</td>
</tr>
<tr>
<td>2006</td>
<td>.800</td>
<td>.674</td>
</tr>
<tr>
<td>2007</td>
<td>.747</td>
<td>.692</td>
</tr>
</tbody>
</table>

*All correlations significant at the 0.01 level

C4 Clinical Site Evaluation

In order to establish a clinical site, first contact is usually made by the Clinical Coordinator or other core faculty, and occasionally a student. Contact information is gathered in order to send the “Clinical Site Profile & Information” sheet (see Appendix H). Once this sheet is filled out by the potential preceptor/s and returned, the Clinical Coordinator discusses the information with site personnel to verify interest, location of the experience, and the DPAS and preceptor expectations. Recently, the program has initiated an additional step, conducting a license check on state medical board web sites. In some cases, potential sites were not utilized because of medical board sanctions/actions or malpractice history. Once approved, the potential site is then sent a cover letter, affiliation agreement and clinical calendar. Upon execution of the agreement, the clinical coordinator negotiates student placement schedule with the site and the Preceptor Guidelines are sent to the preceptor on an electronic flash drive (includes overview of curriculum, objectives, evaluation forms and liability insurance certificate). A site visit is performed by the Clinical Coordinator, regional coordinator during the first rotation period. This site visit is to verify the educational opportunities are consistent with that outlined on the Clinical Site Profile & Information sheet.

While on rotations, the students are required to maintain logs (i.e., patient care log, procedure log, and time log) and fill out evaluations (mid-point, end of rotation evaluation, and review the final preceptor evaluation). Most of the information that was collected by paper has been gradually shifted to electronic means via Typhon and beginning January 2009, logging is entirely electronic. The logs help the Clinical Coordinator determine if the site is providing the necessary patient population and numbers for the students and at what level and/or location (e.g. inpatient vs. outpatient). In 2008, the PA faculty reviewed the clinical procedures list for the program and updated it to reflect current PA practice. In addition, an analysis was performed of the procedure logs submitted by the Class of 2008 over the entire clinical year. It was discovered that there were significant gaps between expectations and the logs. Student feedback revealed that a significant explanation for the gap was failure to log versus failure to perform. While the faculty continue to struggle with the required number of procedures, there is general agreement that students must demonstrate certain skills at least once. Increased monitoring and shift to electronic logging is expected to resolve this issue. The procedure summary reports will be available to the on site evaluation team.

The mid and preceptor evaluations let the clinical coordinator know how the student is performing during the rotation and at the conclusion. The end of rotation evaluation conducted by the student is a chance for the student to evaluate the preceptor and the site; a portion of the evaluation documents the preceptors’ level of supervision. If one of these evaluations comes back as unacceptable, after verification by the student, a follow-up call is placed to the preceptor. If the preceptor agrees with what the student states and is not willing or unable to change, the

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site/preceptor will no longer be used for clinical rotations and the university will revoke the affiliation agreement. If the preceptor disagrees with what the student states and/or is willing to change what is necessary another student will be sent to that site with a site visit scheduled while the student is on rotation. If the site continues to not perform the way it is requested, it will be placed on inactive status and the university will allow its affiliation agreement to expire.

Throughout the clinical year, site visits are scheduled. They are conducted for each student on their first rotation, all family medicine rotations, and additional rotations as necessary based on mid-point evaluations, end of rotation evaluations, or other forms of communication between the site and the CC. These site visits are to ensure that the student is interacting well with the preceptor and the facility staff, how they interact with patients, and if possible, how they conduct a history, physical exam, presentation to the physician, development of a therapeutic plan and management. The latter cannot always be conducted due to HIPAA guidelines and space or time constraints by the practice. The CC interacts with the student and preceptor separately and together to ensure any questions or concerns are handled appropriately. Clinical Coordinator visits are augmented by visits by regional coordinators hired by the program. These are physicians or physician assistants who are contracted each academic term by the University as instructional assistants to work an average of eight hours per week. Currently, the program employs three regional coordinators (R. Moore, M.D., A. Schempp, PA-C, and K. Riley, PA-C).

**Section C Summary**

**Section C – Strengths:**

- The SU DPAS has a well-developed system for monitoring and evaluating student outcomes and acting on results of both quantitative and qualitative data analysis with appropriate modifications if necessary.

**Section C – Areas Needing Improvement:**

- The program has not utilized the full potential of Typhon and add-on enhancements that can be programmed for the SU PA Program's specific needs and assuring compliance with ARC-PA Standards. Student compliance with logging continues to be a challenge and increased monitoring has already been implemented.

**Section D: Student Services**

**D1 Student Health**

Students are required to complete annual health screening (H&P) and PPD screening, in addition to the immunizations required prior to matriculation into the program, these include, PPD, Hepatitis B, Polio, Varicella, and MMR. Immunization requirements are reviewed annually by the clinical coordinator and updated as needed using the CDC recommendations as well as requirements of the clinical affiliates.
All of the student’s health records are kept on file at the Wilkins Wellness Center (student health) on the main campus of the university. Documentation that the health requirements have been completed is maintained on the University’s computer database (Datatel system) and viewed by authorized individuals as necessary to insure compliance. Registration holds are placed on student files if they fall out of compliance with health screening standards. Currently, the students sign a waiver form for the distribution of their immunization record as necessary for clinical rotations and are provided a copy of the assurance form in case it is requested by a clinical site.

The DPAS students have access to the Student Health Services Center on the main campus, which is also the center for all other undergraduate and graduate students on campus. After normal work hours, they have access to the Director of Health Services (Ron Stickley) work and cell phone numbers for emergencies. If needed, the Director will escort the student to the local Urgent Care Center or the Winchester Medical Center’s Emergency Department. Typically, graduate students do not require this service. Currently, three core program faculty are clinically practicing PAs and one as a pharmacist. Rachel Carlson and Amanda Welbourne work one-half day each at a local employee health clinic and Brenda Quincy works 1 afternoon per month at the local Free Clinic. Dr. Trompeter works at a local physician office in diabetic management. The Wilkins Wellness Center is staffed clinically by nurse practitioners and there are no core program faculty participating as the primary health care providers for students in the program.

D2 Student Guidance

Students are provided sufficient opportunities for guidance in understanding program policies and practices. First, the students are required to attend a pre-orientation session during the summer before classes start. At that session, the curriculum and the Student Handbook are reviewed. During the week before classes, four days of orientation are provided. Program policies and documents are provided and reviewed. In addition they are provided overviews of major student services including the Wilkins Wellness Center (student health).

Each student is assigned a faculty advisor. Although students are not required to meet a prescribed number of times with their advisor, they are encouraged to meet at least once a semester. In cases where the faculty identifies an at risk student, the faculty advisor is asked to arrange an appointment with his/her advisee. Sanction letters (e.g. probation) are copied to advisors in order to keep them informed. To date, this system has appeared to work satisfactorily. In cases of potential problems, the faculty are to use a Counseling Action Form in order to provide appropriate documentation (see Appendix H).

Two years ago, the program implemented a system whereby students who have been accepted but have not matriculated will be assigned an advisor. This is followed up with a letter to the student from the advisor informing them of contact information (email and phone number) with an open invitation to contact them.

Students with personal problems often require the services of a professional counselor. This service is available to the student through the Wilkins Wellness Center on main campus. In
addition, the University chaplain is available to counsel students on personal problems that may be related to their religious faith.

To augment communication and identify potential student problems, the program utilizes two additional mechanisms. First, each class elects a student liaison. This person is charged with channeling general class concerns or ideas to the faculty and is invited to share these at faculty and division meetings. Second, the director conducts meetings with students approximately once a semester during "director's hour". Agendas for the director's hours are determined by the director and the class liaisons. On occasion, special meetings are called as needed.

D3 Student Identification

The DPAS students while on clinical rotations are required to wear a short-white lab coat with identification badges that state their name, Shenandoah University and that they are a Physician Assistant Student.

Section D – Strengths:

- Shenandoah University and the PA Program remain student centered and provide appropriate support and resources for graduate-level students.

Section D – Areas Needing Improvement:

- None

Section E: Provisional Accreditation

Not applicable. The Shenandoah University Physician Assistant Program seeks regular accreditation through this application.

Section F: Accreditation Maintenance

The Program has complied with all Standards relative to maintaining accreditation with one exception as outlined below.

- The program has complied with administrative requirements (F1.01).
- There have been no adverse actions by the regional accrediting agency (F1.02).
- The SU PA Program has agreed to a comprehensive review and site visit scheduled by the ARC-PA for April 16 and 17, 2009. Progress reports have been submitted as requested in the interim and an application and self study report is provided eight weeks in advance of the April review (F1.03-4).
- There has been no changes in the program or medical directors since the inception of the program. The ARC-PA was informed of the resignation of core faculty members and additional hires. All vacated positions were filled in a timely manner (F1.05-6).
- The program has not had an interim program director (F1.07-8).
- The SU PA Program has not relocated nor has it established a satellite site (F1.09).
• The SU PA Program awards a Master of Science in Physician Assistant Studies and this has not changed since the inception of the program. There have been no changes in program length and no significant changes in the requirements. Curricular modifications that have occurred have been minor and credit hours redistributed to priority areas resulting in no change in overall credit hours since the last visit and no impact on tuition. However, the ACLS requirement was previously covered through tuition and last year was moved to an extracurricular requirement as typical in many other PA programs. This was published in advance of matriculation for that class (F1.10a-c).

• The maximum enrollment initially authorized by the ARC-PA for the SU Program was 24 for year one, 30 for year two and 36 for years three and beyond. While the program has matriculated classes exceeding 36, not until 2008 (Class of 2010) has it exceeded 41 (36 +15% allowance by Standards). Generally, when the class size has been over 36, it has been the result of decelerations or students returning from leaves of absence. The matriculating class in 2008 (Class of 2010) consisted of 40 newly admitted students and two decelerated and one returning from a medical leave of absence. As noted above in the Section A, the program failed to accurate predict the number of students who would accept the offer of admission and matriculate. The program uses a quasi-rolling admissions process and data from previous years indicated that a greater percentage of candidates would likely withdraw their acceptances (the overall conversion rate in the past has averaged 50%). Since the situation had already occurred, the program elected to not seek approval of the ARC-PA retroactively but instead has requested an increase of class size by two in this application and has taken steps to provide an adequate cushion to ensure the class is not oversubscribed. In no cases, has the program exceeded its approved maximum aggregate size and in all cases had the appropriate resources to provide a quality education (F1.10d-e).

• There are no plans to transfer sponsorship of the program (F1.11).

• Annual accreditation fees are paid in full (F1.12).

Section F – Strengths:
• The Program has responded to previous citations and initiated enhancements to the curriculum as well as operational policies and procedures.

Section F – Areas Needing Improvement:
• The program failed to provide timely request for increasing the maximum class capacity. Corrective actions outlined above.

Section IV: Summary

The Self-Study Committee (SSC) concluded that the Shenandoah University Division of Physician Assistant Studies provides a sound educational program that prepares its students to become competent health care providers and to assume the role of physician assistants as described in the Graduate Competencies document (Appendix B). The SSC finds the Shenandoah University PA Program to be in general compliance with Standards as set forth by the Accreditation Review Commission on Education for the Physician Assistant. Areas identified for improvement are not considered to be major deficiencies but areas that when
addressed, will enhance the PA Program and its curriculum. Strengths are identified below as are areas needing improvement and plans for addressing them.

The specific strengths identified by the Self-Study Committee are:

- Administrative and community support are outstanding.
- The University has provided excellent fiscal and facility resources to support the program, the students and the curriculum.
- Experienced leadership is balanced with consensus building/democratic management style.
- Early success of curriculum outcomes has been demonstrated via PACKRAT and PANCE scores, preceptor and graduate surveys as well as successful employment of graduates.

The specific areas which need improvement or are opportunities for enhancement identified by the Self-Study Committee are:

- Reduce student attrition to national average or less.
- Resequence Clinical Pharmacology to even academic workload for students and to improve overall student and preceptor ratings.
- Expand didactic year clinical exposure for students in order to provide opportunities for early application of new skills and knowledge as well to ease transition for students with minimal health care exposure.
- Enhance documentation of clinical experiences (especially procedures, psychiatry and geriatrics, long term) through the enhancements to the Typhon tracking system and procedures.
- Provide inexperienced faculty with additional development and mentoring in order to enhance learning and student satisfaction.
- Enhance opportunities for long-term care experiences.
- Continue to explore efficiencies in the admissions process in response to the growing applications.
- A credit hour to contact hour to credit discrepancy between the PA and physical therapy anatomy taken as an interdisciplinary courses was identified as an issue by the didactic phase self-study committee.

Plans for Improvement, Person Responsible and Timetable

<table>
<thead>
<tr>
<th>Plan</th>
<th>Person Responsible</th>
<th>Timeline (Start – Completion)</th>
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<tbody>
<tr>
<td>Curriculum review and revision to include but not limited to the following:</td>
<td>Carlson</td>
<td>January 2009-August 2009</td>
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<tr>
<td>• Resequecing issues raised in SSR (e.g Pharmacology).</td>
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<tr>
<td>• Expansion and integration of Didactic Phase Clinical Experiences</td>
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<td>Plan</td>
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<tr>
<td>• Resolve contact hour to credit hour discrepancy issue for anatomy</td>
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<td>• Evaluate and revise if needed</td>
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<tr>
<td><strong>Enhance clinical tracking system to provide better documentation</strong></td>
<td>Welbourne</td>
<td>January 2009 - Ongoing</td>
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<td><strong>of student exposure to a variety of clinical disciplines, clinical</strong></td>
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<td><strong>procedures and types of patients:</strong></td>
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<td>• Review and reaffirm minimum standards for exposure and participation</td>
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<td>• Develop additional clinical training sites as needed to support standards</td>
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<tr>
<td>• Work with vendor (Typhon) to customize SU PA templates</td>
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<td>• Evaluate and revise if needed</td>
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<td><strong>Reduce attrition to or less than the national average</strong></td>
<td>Miller</td>
<td>April 2009 - Ongoing</td>
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<td>• Increase availability of tutoring</td>
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<td>• Early identification and screening for risk factors (in candidates as well as matriculants)</td>
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<td>• Continue analysis to determine predictors of success and modify admissions processes as needed.</td>
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<td>• Continue and enhance early interventions (e.g. study skills seminars, tutoring, advising)</td>
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<td><strong>Increase/maintain all course and instructor evaluations at a level of at least 3.75 or better with no marks less than 3.00.</strong></td>
<td>Carlson</td>
<td>January 2009 - Ongoing</td>
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<td>• Faculty development plans will focus on identified areas of weakness.</td>
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<td>• Increase frequency of peer and self evaluations for individuals at risk of not meeting standards.</td>
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<td><strong>Develop long-term care clinical experiences that will be consistent for all students and educationally beneficial.</strong></td>
<td>Welbourne &amp; Laidlaw</td>
<td>January 2009 - December 2009</td>
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<td>• Further investigate opportunities</td>
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<td>• Ensure educationally relevant and sound (e.g. supervision and related to PA role)</td>
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<td>• Obtain affiliation agreements</td>
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<td>• Plan and implement schedule</td>
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<tr>
<td>• Evaluate and revise as needed</td>
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