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Vital Signs of U.S. Osteopathic Medical Residency Programs Pivoting to Single Accreditation Standards

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Vital Signs of U.S. Osteopathic Medical Residency Programs

Pivoting to Single Accreditation Standards

by

Timothy S. Novak

A dissertation submitted in partial fulfillment of the requirements for the degree Doctor of Business Administration
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Dedication

A special thanks to my family, friends, teachers, spiritual leaders and co-workers who have supported, inspired and created purpose for me throughout my life. I am humbled and grateful to have been and remain in your presence. Dedicated to Nancy, Theresa, Natalie & Nick.
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List of Tables

Table A: GME Program Number of Residents .......................................................... 55
Table B: GME Program Director Number of Years of Service ............................... 55
Table C: GME Program Number of Full-time Paid Faculty ........................................ 55
Table D: GME Program Number of Volunteer Faculty .............................................. 55
Table E: GME Program SAS Indicators RQ1 .......................................................... 93
Table F: Summary of Practical Indicators for SAS Accreditation Achievement RQ1 94
Table G: GME Program SAS Indicators RQ2 .......................................................... 95
Table H: Summary of Practical Indicators for SAS Accreditation Achievement RQ2 96
Table I: GME Program SAS Indicators RQ3 .......................................................... 98
Table J: Summary of Practical Indicators for SAS Accreditation Achievement RQ3 99
Table K: GME Program SAS Indicators RQ4 .......................................................... 101
Table L: Summary of Practical Indicators for SAS Accreditation Achievement RQ4 102
Table M: GME Program SAS Indicators RQ5 .......................................................... 104
Table N: Summary of Practical Indicators for SAS Accreditation Achievement RQ5 105
List of Figures

Figure 1: ACGME Steps to becoming a doctor ......................................................... 13
Figure 2: AMA Specialties for MDs ........................................................................ 14
Figure 3: AMA Specialties for DOs ........................................................................ 15
Figure 4: Health Resources and Services Admin Primary Care Projections 2020 .... 16
Figure 5: Paying for GME ...................................................................................... 16
Figure 6: What are the Benefits of GME Single Accreditation System? ............... 24
Figure 7: GME Programs Represented in Study Group ........................................ 45
Figure 8: Geographic Locations ............................................................................. 46
Figure 9: Sponsor Organization Tax Designation .................................................. 47
Figure 10: Sponsor Organization Description ......................................................... 48
Figure 11: Dually Accredited (AOA and ACGME) Programs ............................... 49
Figure 12: CMS Direct and Indirect Funding ........................................................ 50
Figure 13: Types of Medical Degrees of Program Directors ................................ 51
Figure 14: Research Facility Affiliations ................................................................. 52
Figure 15: 80 hours per Week Duty Time ............................................................... 53
Figure 16: Competitive Research Funding ............................................................. 54
Figure 17: Access to a Research Facility ................................................................. 57
Figure 18: Access to Research Faculty ................................................................. 58
Figure 19: Access to Simulation Labs ................................................................. 59
Figure 20: Access to Other GME Programs ......................................................... 60
Figure 21: Access to GME Admin Program Support Personnel................................. 61
Figure 22: Residents Taught QIPS................................................................. 62
Figure 23: Conduct Team-based Quality Improvement Projects............................. 63
Figure 24: Real-World Aspects of Patient Safety .............................................. 64
Figure 25: Taught Clinical Learning Environment Review (CLER) ......................... 65
Figure 26: JT Commission National Pt Safety Training ...................................... 66
Figure 27: Local Health Facility Safety and Quality and Safety Initiatives .............. 67
Figure 28: Director Designated Principal Responsible Faculty ............................. 69
Figure 29: Programs with Co-Directors ......................................................... 70
Figure 30: Scholarly Productivity ...................................................................... 71
Figure 31: Program Faculty Specialty Certified ................................................... 72
Figure 32: Faculty ABMS Certified .................................................................... 73
Figure 33: Faculty Trained to Teach Evidence Based Medicine ............................ 74
Figure 34: Faculty Trained to Teach Research Methods ....................................... 75
Figure 35: Faculty Trained to Teach Writing Skills............................................ 76
Figure 36: Faculty Trained to Teach Team Building Skills ................................. 77
Figure 37: ACGME Stated benefits of SAS (Seamless Eligibility/Access) ............ 79
Figure 38: ACGME Stated benefits of SAS (Consistent Training/Evaluation) ....... 80
Figure 39: ACGME Stated benefits of SAS (Elimination of Duplication) .......... 81
Figure 40: ACGME Stated benefits of SAS (Cost Savings) ................................ 82
Figure 41: Cost Analysis of Potential SAS Impact ............................................. 84
Figure 42: Affordability of GME Program without CMS funding ....................... 85
Figure 43: Anticipated Impact of SAS on Program Size .................................... 86
Abstract

Osteopathic physician (D.O.) residency programs that do not achieve accreditation under the new Single Accreditation System (SAS) standards by June 30, 2020 will lose access to their share of more than $9,000,000,000 of public tax dollars. This U.S. Centers for Medicare & Medicaid Services (CMS) funding helps sponsoring institutions cover direct and indirect resident physician training expenses. A significant financial burden would then be shifted to marginal costs of the residency program’s sponsoring institution in the absence of CMS funding. The sponsoring institution’s ability or willingness to bare these costs occurs during a time when hospital operating margins are at historic lows (Advisory.com /Daily Briefing /May 18, 2017 | The Daily Briefing / Hospital profit margins declined from 2015 to 2016, Moody's finds). Loss of access to CMS funding may result in potentially cataclysmic reductions in the production and availability of primary care physicians for rural and urban underserved populations. Which osteopathic residency programs will be able to survive the new accreditation requirement changes by the 2020 deadline? What are some of the defining attributes of those programs that already have achieved “initial accreditation” under the new SAS requirements? How can the osteopathic programs in the process of seeking the new accreditation more effectively “pivot” by learning from those programs that have succeeded? What are the potential implications of SAS to both access and quality of health care to millions of Americans? This report is based upon a study that examined and measured how osteopathic physician residency programs in the U.S. are accommodating the substantive structural, financial, political and clinical requirements approximately half way through a five-year adaptation period. In 2014, US Graduate Medical
Education (GME) physician program accreditation systems formally agreed to operate under a single accreditation system for all osteopathic (D.O) and allopathic (M.D.) programs in the U.S. Since July 1, 2015, the American Osteopathic Association (AOA) accredited training programs have been eligible to apply for Accreditation Council for Graduate Medical Education (ACGME) accreditation. This agreement to create a Single Accreditation System (SAS) was consummated among the AOA, the American Association of Colleges of Osteopathic Medicine (AACOM) and ACGME with a memorandum of understanding. As this research is published, the ACGME is transitioning to be the single accreditor for all US GME programs by June 30, 2020. At that time, the AOA would fully relinquish all its GME program accreditation responsibilities. The new SAS operates under published ACGME guidelines and governance.

Business policy and health care resource allocation question motivated this research. Failure of osteopathic programs to “pivot” to the new standards could result in fewer licensed physicians being produced in the high demand primary care field. Potential workforce shortage areas include urban and especially rural populations (CRS Report 7-5700 R44376 Feb 12, 2016).

Large physician shortages already have been projected to care for a rapidly aging US population without considering the impact of the GME accreditation changes currently underway (Association of American Medical Colleges 2017 Key Findings report).

The goal of this research is to provide osteopathic GME programs practical insights into characteristics of a sample of osteopathic GME programs that have successfully made the “pivot” into SAS requirements and been accredited by ACGME and those that have not. The study seeks to better understand the experiences, decisions, challenges and expectations directly from osteopathic programs directors as they strive to meet the realities of the new SAS requirements. Do programs that are already accredited differ significantly from
those that have not? How do characteristics such as program size, geographic locations, clinical program components, program sponsor structure, number and experience of faculty and administration, cost planning and perceived benefits of the movement to SAS factor into successfully meeting the new requirements before the 2020 closing date? A cross-sectional research survey was designed, tested and deployed to a national sample of currently serving osteopathic GME program directors. The survey elicited data about each program’s “pivot” from AOA GME accreditation practices and guidelines to the new Single Accreditation System (SAS). The survey instrument was designed to obtain information about patterns in osteopathic GME program curricula, administrative support functions, faculty training, compliance requirements and program director characteristics shared by those programs that have been granted “initial accreditation” by the Accreditation Council for Graduate Medical Education (ACGME) who administer SAS. Thirty five (35) osteopathic GME program directors responded to the 26 question survey in June 2017. Descriptive statistics were applied and central tendency measures determined. The majority of survey respondents were Doctors of Osteopathic Medicine (D.O.s) from specialty residency programs sponsoring an average of 16 residents. Respondents were mostly non-profit, urban, multi-facility health system locations with an existing affiliation with a research college or university. About half of the programs had completed some form of fiscal due diligence related to the potential cost impact of SAS. None of those surveyed reported utilizing outside consultants to assist in the SAS “pivot” process. Most programs plan to keep the same number of residents while others expressed an interest in expanding or contracting. None of the respondents planned to close their program. The dichotomous dependent variable (DV) was whether or not the Osteopathic GME program had “achieved or not yet achieved initial SAS accreditation” at the time of the survey. A cross-
tabulation analysis of the DV with potential predictive variables (IV) was conducted and Chi-square and various exact significance tests were applied to gage goodness of fit and independence. Results were grouped into categories that aligned with the five research questions and hypotheses. Several characteristics were shared by those programs that achieved SAS. GME sponsor institutions that currently have dually accredited programs by the AOA and ACGME seemed to be at a distinct advantage. Although they represented a smaller number of total survey respondents (20%), all primary care program participants reported SAS achievement. Directors reported an average of six (6) full-time paid faculty members teaching in their programs and twice that number of preceptor volunteers in the total sample. Realization of any operational cost savings or efficiencies as a result of moving to a single accreditation system was a principle concern for the majority (86%) of GME program director respondents, regardless of current accreditation status, although most felt SAS would result in offering medical student graduates access to all accredited US GME residency and fellowships programs.
Chapter One

Introduction

In 2014, U.S. Graduate Medical Education (GME) physician program accreditation systems formally agreed to operate under a single accreditation system (SAS) for all osteopathic (D.O) and allopathic (M.D.) programs in the U.S. This SAS agreement was consummated among the American Osteopathic Association (AOA), the American Association of Colleges of Osteopathic Medicine (AACOM) and the Accreditation Council for Graduate Medical Education (ACGME) with a memorandum of understanding (MOU). Since July 1, 2015, the AOA accredited training programs have been eligible to apply for SAS accreditation. As this research is published, the ACGME is transitioning to be the single accreditor for all United States GME programs by June 30, 2020. At that time, the AOA will fully relinquish all its GME program accreditation responsibilities but maintain a minority representation and governance position in SAS. The new SAS operates under published ACGME guidelines and governance.

A cross sectional research survey was designed tested and deployed to a national sample of currently serving osteopathic GME program directors. The survey elicited data about each program’s “pivot” from AOA GME accreditation practices and guidelines to the new Single Accreditation System (SAS) standard. The survey instrument was designed to obtain information about patterns in osteopathic GME program curricula, administrative support functions, faculty training, compliance requirements and program director characteristics shared by programs which have been granted “initial accreditation” by the Accreditation
Council for Graduate Medical Education (ACGME) which administer SAS. Also information about how expressed director’s expectations of accomplishment of ACGME’s four initial published goals and benefits of SAS impacted initial accreditation to date. Finally the survey examines types of financial due diligence that has occurred related to the expected impact of SAS on the sponsor institution going forward and if any cost savings can be realized.

**Study Goal**

The goal of this research is to provide practical, useful insights into certain characteristics of a sample of GME programs that have successfully made the “pivot” into SAS requirements. This information is derived directly from currently serving osteopathic physician GME program directors. The experiences, decisions, challenges and expectations of osteopathic programs facing the realities of meeting the new SAS requirements will likely differ based on program size, rural versus urban location, single versus multiple clinical program components, experience of faculty and administration, costs and time associated with successfully meeting the new requirements before the 2020 closing date. Gathering this information and disseminating results early may provide useful insights to stakeholders and time for them to weigh information. This timely aspect gives the study increased prospective value and relevance. With the US healthcare industry in a state of rapid change, industry leaders will require a broad range of information from which to draw upon.

**Significance of the Problem**

Osteopathic physician (D.O.) residency programs that do not achieve accreditation under the new Single Accreditation System (SAS) standards by June 30, 2020 will lose access to their
share of more than $9,000,000,000 (nine billion) public tax dollars (Medicare Direct Graduate Medical Education (DGME) Payments https://www.aamc.org). This U.S. Center for Medicare & Medicaid Services (CMS) funding helps GME sponsoring institutions cover direct and indirect resident physician training expenses. A significant financial burden would be shifted to marginal costs of the residency programs sponsoring institution in the absence of CMS funding. The sponsoring institutions, which typically consist of acute care hospitals, bare primary contractual financial responsibility for the expenses associated with their sponsored GME residency and fellowship programs. Currently 5,564 registered hospitals are in the U.S., according to the American Hospital Association 2017. Eighty five percent of these hospitals are considered rural. These GME sponsoring institution’s ability or willingness to bare these training costs without CMS funding during a time when hospital operating margins have been running at historic lows; "We expect revenue growth will remain under pressure in 2014," said Moody's Analyst Jennifer Ewing. "We expect continued financial weakening due to volume declines in a predominantly fee-for-service environment, reinforcing our negative outlook on business conditions for not-for-profit hospitals.” Many hospitals are already facing closure in America without considering SAS cost burden, potentially leaving entire community’s healthcare needs underserved. According to Brook Murphy’s January 15, 2017 article in Becker’s Hospital Review; “about 673 rural hospitals across 42 states are vulnerable to closure” (February 2016 iVantage Analytics study). There is a dearth of current published literature offering either an historical perspective or empirical analytic information specific to the movement toward a single GME accreditation system. Therefore, a useful synthesis and critical analysis of relevant literature was not possible. The SAS process is a new, evolving organizational change in structure and even function for GME which is still in the formative and defining process. Extant and relevant publications
describing characteristics and requirements of GME accreditation are referenced.

At this writing, the five-year migration of osteopathic GME programs to the new SAS under ACGME is only half complete. Just like anything new, emotions often run high with changing environments and relationships amongst stakeholders. This research was conducted in an objective manner utilizing principles of the scientific method. Results were obtained directly from individual osteopathic program stakeholders. Logical inferences regarding trends and characteristics of programs were made when supported by the data. The end-game of the SAS transitional GME story is by no means complete, and given the complexities of the U.S. health care system and the myriad structural, cultural and operational forces affecting it, the impacts of SAS on GME will be subject to considerable future analysis. At stake is access of Americans to licensed physicians who have been and remain the steadfast pillars of our high-quality U.S. healthcare system.

**Problem Statement**

This report is based on a study that examined and measured how osteopathic physician residency programs in the U.S. are accommodating the substantive structural, financial, political and clinical requirements almost half way through a five-year adaptation period.

Business policy and health care resource allocation questions motivated this research. Failure of osteopathic programs to “pivot” to the new standards could result in fewer licensed physicians being produced in high need primary care for medical services in workforce shortage areas that include urban, but especially rural populations. The Complexities of Physician Supply and Demand: Projections from 2013 to 2025 report published in March 2015 for the Association of American Medical Colleges by HIS, Inc., details large physician
shortages to care for a rapidly aging US population even without considering the impact of GME accreditation changes currently underway.

Loss of access to CMS funding may result in potentially cataclysmic reductions in the production and availability of primary care physicians for rural and urban underserved populations. It is widely known that osteopathic GME programs have historically generated a high percentage of primary care family physicians that tend to gravitate to rural, underserved communities. These osteopathic physicians’ GME training often occurs in small, rural, community hospital settings where they continue to serve after completing their residencies. Unfortunately, these smaller community hospitals already operate with scant financial resources and margins. Their insurance payer mix tends to be a high percentage of Medicare and Medicaid in addition to no pays. As a result, these hospitals have adapted a community based approach to attract and train their physician residents, which translates to a number of highly qualified GME physician preceptors actually being “volunteers”, giving of their training time and expertise for the greater good of the community they live and their profession. The focus is placed on training physicians who have strong clinical and interpersonal skills necessary to care for the communities they serve. Less time is spent on research and scholarly activities as many of these training sites are not close to or affiliated with established research institutions. The good news is that these osteopathic GME programs have historically operated in a cost-effective manner allowing them to thrive within their distinctive environment. Concerning is these cost efficiencies may be impacted under the newly implement SAS standards going forward. This concern prompts the following questions: Which osteopathic residency programs will be able to survive the new
accreditation requirement changes by the 2020 deadline? What are some of the defining attributes of those programs that already have achieved “initial accreditation” under the new SAS requirements? How can the osteopathic programs in the process of seeking the new accreditation more effectively “pivot” by learning from those programs that have succeeded? What are the potential implications of SAS to both access and quality of health care to millions of Americans?

Thirty-five (35) osteopathic GME program directors responded to the 26-question survey in June 2017. Descriptive statistics were applied and central tendency data determined. The majority of survey respondents were Doctors of Osteopathic Medicine (D.O.s) from specialty residency programs sponsoring an average of 16 residents. Respondents were mostly non-profit, urban, multi-facility health system locations affiliated with a research college or university. About half of the programs did some fiscal due diligence as to the impact of SAS. None of the program directors reported using outside consultant services to assist with their “pivot” to SAS. Most programs plan to keep the same number of residents. Some expressed an interest in expanding or contracting. None planned to close their GME program down at the time of the survey.

The dichotomous dependent variable is defined as “achieved or not yet achieved initial SAS accreditation”. The program’s stage in the SAS approval process was not incrementally considered as only accredited GME programs can receive CMS funding. Ninety-one (91) data elements as predictive variables were grouped into five (5) categories by relevant research questions. A cross tabulation descriptive statistical analysis between predictor variables and the dependent variable was completed utilizing SPSS statistical software. Chi-square for goodness of fit and independence were calculated. The Fisher Exact Test and
others were used to evaluate statistical significance. Several common characteristics were noted in those osteopathic GME programs that have achieved early initial SAS accreditation. These include faculty training, comprehensive residency program administrative support structure and GME sponsor institutions having parallel or dually accredited programs (AOA and ACGME) already in place. A simple model is presented to quickly illustrate these characteristics.

**Research Questions and Hypotheses**

Five (5) research questions were posed in this study. Four of the five research questions had a set of null and alternative hypotheses as each element stood alone. The survey instrument was designed so that specific survey questions and responses were assigned to a specific research question to support either the failure to reject the null hypothesis or the acceptance of the alternative.

**Research Question 1:** What general shared characteristics are associated with current osteopathic GME programs that have already achieved “initial program accreditation” under the new Single Accreditation System?
**Research Question 2:** Which curriculum elements are most prevalent in osteopathic GME programs that have already achieved “initial program accreditation” under the Single Accreditation System?

**H0** = There are no significant differences between the prevalence of curriculum elements of those Osteopathic Graduate Medical Education (GME) residency programs which have already successfully made the “pivot” from AOA accreditation to the new Single Accreditation System (SAS) accreditation under ACGME standards and those programs which have not yet achieved SAS accreditation.

**H1** = There are significant differences between the prevalence of curriculum elements of those Osteopathic Graduate Medical Education (GME) residency programs which have already successfully made the “pivot” from AOA accreditation to the new Single Accreditation System (SAS) accreditation under ACGME standards and those programs which have not yet achieved SAS accreditation.

**Research Question 3:** How do osteopathic GME program directors and assigned faculty characteristics impact the attainment of “initial program accreditation” under the Single Accreditation System?

**H0** = There are no significant differences between program director and faculty characteristics of those Osteopathic Graduate Medical Education (GME) residency programs which have already successfully made the “pivot” from AOA accreditation to the new Single Accreditation System (SAS) accreditation under ACGME standards and those programs which have not yet achieved SAS accreditation.
H1 = There are significant differences between program director and characteristics of those Osteopathic Graduate Medical Education (GME) residency programs which have already successfully made the “pivot” from AOA accreditation to the new Single Accreditation System (SAS) accreditation under ACGME standards and those programs which have not yet achieved SAS accreditation.

Research Question 4: How do osteopathic GME program directors expressed expectations for achievement of the four ACGME published “goals and benefits” for the new Single Accreditation System (SAS) relate to actual achievement of “initial program accreditation” under the Single Accreditation System?

H0 = There is no significant difference between GME programs likelihood of achievement of “initial program accreditation” under the Single Accreditation System based upon the program director’s expressed expectation for achievement of the ACGME published “goals and benefits”.

H1 = There is a significant difference between GME programs likelihood of achievement of “initial program accreditation” under the Single Accreditation System based upon the program director’s expressed expectation for achievement of the ACGME published “goals and benefits”.
**Research Question 5**: How does conducting financial due diligence related to the potential fiscal impacts of the new Single Accreditation System on osteopathic GME programs impact achievement of “initial program accreditation” under SAS?

**H0** = Conducting financial due diligence related to the potential fiscal impacts of the new Single Accreditation System on osteopathic GME programs has no significant impact on achievement “initial program accreditation” under the Single Accreditation System.

**H1** = Conducting financial due diligence related to the potential fiscal impacts of the new Single Accreditation System on osteopathic GME programs has significant impact on achievement “initial program accreditation” under the Single Accreditation System.
Chapter Two

Literature Review

The current published literature that provides an historical perspective specific to a movement to a single GME accreditation system as a research topic is very limited. Therefore, no synthesis and critical analysis of very relevant literature is possible for this study. The accreditation is a new and evolving organizational change in structure and organization for GME that is still in the process of forming. The initial SAS phase will not be completed until June 30, 2020. Relevant ACGMA, AOA and other publications describing characteristics and requirements of GME accreditation offer the most comprehensive principle sources of reference. The literature section provides a basic framework so readers can better understand the stakeholders and financial interests associated with U.S. GME.

Medicare and GME

The U.S. tax payer stepped into the GME business in 1965 when Congress passed the Medicare Bill. Public resources were allocated by Congress to ensure high standards and quality physician was training was taking place and maintained. Measurability, and where appropriate, standardization of training requirements is a concern for most industries, not just physicians or healthcare. Although Medicare funding was thought to be a temporary funding source for GME training, fifty-two years later it is still in place and disperses over nine billion dollars annually through CMS (U.S. Congress, House Committee on Ways and

GME Accreditation

When students graduate from medical school they obtain the privilege of using title: “doctor” with credentials of M.D. (medical doctor) or D.O. (doctor of osteopathic medicine). However, their legal ability to practice medicine independently does not happen until after they successfully complete a residency program in their area of training such as family practice, orthopedic surgery, etc. under the direction of GME appointed faculty supervisors who are licensed physicians or surgeons in their field. Some residents will also seek additional skill and credentials in subspecialty training fellowship programs. Graduate medical education accreditation has been the realm of the Accreditation Council for Graduate Medical Education (ACGME) and the American Osteopathic Association (AOA) in recent years. Both organizations based in Chicago, IL are charged with ensuring appropriate curriculum, quality and safety standards exist at GME training facilities and programs they accredit. The AOA accredits osteopathic (D.O.) residency programs while the ACGME accredits allopathic (M.D.) programs.

Physicians must complete all training requirements and then pass boards examination boards as established by relevant governing bodies. A license to practice medicine is then issued by each state in which the physician applies and is qualified by state (and often
national guidelines) to practice. Only when the state government confers a license to practice medicine and GME training and testing are complete can a doctor diagnose and treat patients independently or unsupervised. Both M.D.s and D.O.s receive the same medical license by the states. In addition, all practicing physicians must address malpractice insurance requirements and other regulatory issues. In 1972, five organizations under the direction of the American Medical Association (AMA) were charged with creating the Coordinating Council on Medical Education (CCME). These five organizations are the American Medical Association, the American Board of Medical Specialties, the American Hospital Association, the Association of American Medical Colleges, and the Council of Medical Specialty Societies. The charge of the CCME was to approve and coordinate all areas of medical education. The CCME was abolished in 1981 and the Association of College Graduate Medical Education (ACGME) formed in an effort to stream-line. The ACGME would not become separately incorporated until 2000. They publish a GME program training standards for the specialties they accredit. They inspect these programs to ensure compliance. Once accredited, programs have access to CMS funding to support that GME training program. Steps to Becoming a Physician.

Figure 1: Source ACGME Website 2017
Osteopathic Recognition and Specialized Training under SAS
(AOA Website 2017)

The AOA was first formed in 1897 based upon Osteopathic principles. One hundred and twenty years later these practices are being recognized and preserved under SAS as an important element to the future of our health care system by establishing an osteopathic designation. The single accreditation system gives programs the opportunity to spread osteopathic principles and practices. However, GME osteopathic program application and recognition cannot take place until initial accreditation under ACGME SAS is realized.

Specialties for M.D.s

Ophthalmology represents the largest specialty sector for practicing MDs as of 2015 and geriatric medicine is their smallest specialty sector (see Figure 2).
Specialties for D.O.s

Family medicine and general practice represents the largest specialty sectors for practicing DOs as of 2015 and plastic surgery is their smallest specialty sector (see Figure 3).

![Percentage of Active Physicians with a Doctor of Osteopathic Medicine (DO) Degree by Specialty, 2015](image)

Source: AMA Physician Masterfile (December 2015)

Figure 3

An Agreement Entered

The ACGME and AOA have detailed information and tools on their respective organizational websites designed to facilitate the SAS unification process. It is important to note that SAS was agreed upon by the organizational leadership. The pathway options to SAS initial accreditation is illustrated in Appendix B. The four initial published and anticipated benefits of the SAS movement are presented in Appendix C. The document outlining the basic terms of the executive agreement entered in 2014 is included in Appendix D. Although at this writing, all GME programs must comply with and achieve
SAS initial accreditations by June 30, 2020 in order for them to be GME accredited and have access to CMS funding.

Primary Care Physician Projections 2010-2020

Projected Demand for Primary Care Physicians

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total primary care physician demand (FTE)</td>
<td>212,500*</td>
<td>241,200</td>
</tr>
<tr>
<td>General</td>
<td>164,400</td>
<td>187,300</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>44,800</td>
<td>49,600</td>
</tr>
<tr>
<td>Geriatrics</td>
<td>3,300</td>
<td>4,300</td>
</tr>
<tr>
<td>Primary care physician supply</td>
<td>205,000</td>
<td>220,800</td>
</tr>
<tr>
<td>Supply and demand</td>
<td>(7,500)</td>
<td>(20,400)</td>
</tr>
</tbody>
</table>

* National demand projections presented in this report assume that in 2010 the national supply of primary care physicians was adequate except for the approximately 7,500 FTEs needed to de-designate the primary care HPSAs.

**This category includes general and family practice, and general internal medicine.

Figure 4: Health Resources and Administration 2010 Report

Figure 5: Frederick Chen, MD, MPH University of Washington (Paying for GME)
Chapter Three

Methods

A cross sectional research survey was designed tested and deployed to a national sample of currently serving osteopathic GME program directors. The 26 question survey elicited data about certain characteristics about each program and its current “pivot” status from American Osteopathic Association (AOA) GME program accreditation to the new Single Accreditation System (SAS) under the Accreditation Council for Graduate Medical Education (ACGME) standards. The survey was distributed electronically to be compatible with personal computers, tablets or smart phones. The pilot test of the tool determined that osteopathic GME program directors could complete the survey in approximately ten minutes. All survey participants’ were volunteers with no incentive beyond knowledge of contribution to this research was provided.

Participants

As of this study, 34 osteopathic colleges in 49 locations throughout the U.S. trained students to become physicians and 265 Graduate Medical Education (GME) osteopathic residencies or fellowship training programs were identified across all clinical specialties in the U.S. The potential participants were identified and drawn from the ACGME website which provided public updates as to the status of current GME programs transitioning to SAS.
Participants in this study consisted of a net, responsive, random sample of 35 residency program directors derived from a total of 239 programs which is 90% of the osteopathic GME program directors who were successfully identified and sent an email request via Qualtrics to participate in this study. Qualtrics is a privately held experience management company, with co-headquarters in Provo, Utah and Seattle, Washington, in the United States. The researcher was licensed to use the survey software via USF’s institutional agreement. Approximately 10% of the targeted population’s emails were returned or “bounced back” due to incorrect email address. The research group was emailed the research survey using Qualtrics with the same research disclosures, instructions, descriptions and consents. The survey data were gathered during the period of June 8-30, 2017. A total of three electronic reminders were sent during the survey period to encourage participation. Eighty percent (80%) of responses were received following the first reminder, seventeen percent (17%) from the second and three percent (3%) following the third reminder.

Forty-eight (48) survey respondents of the 239 programs contacted responded with their consent to participate in the survey. Forty-three (43) undertook and submitted a survey response which thirty-five (35) were complete (not missing key response to the dependent variable question) and serve as basis for this study. The net, completed survey responses represented fourteen point six percent (14.6%) of the universe initially contacted.

**Institutional Review Board (IRB)**

A formal request for IRB review was submitted by the researcher to and conducted by the University of South Florida. An IRB waiver for this cross-sectional survey study was
granted under specific guidelines that were recorded and carefully followed (Appendix F). The IRB approved Informed Consent form describing study procedures, benefits and risks was made available to all potential participants via web link as well as embedded in the survey instrument. The form provided a clear explanation of the purpose of the study. It assured participants that all the data gathered would be anonymous and used in aggregate form only to protect the identity of the participants and their facilities. Also, the form provided the name and contact information of the principle investigator. Survey participants were required to check a box on the Qualtrics survey instrument verifying their understanding of and consent to participate in this research study. The survey questions were only made visible to participants who provided consent; upon consent, participants could proceed with survey responses.

**Survey Instrument**

The research survey included twenty-six (26) questions and was estimated to require approximately 10 minutes for participants to complete.

The survey instrument was designed specifically to obtain information about patterns in osteopathic GME program curricula, administrative support functions, faculty training, compliance requirements and program director characteristics shared by programs which have and have not been granted “initial accreditation” by the Accreditation Council for Graduate Medical Education (ACGME) who administers SAS. The survey was designed to illuminate potential relationships between survey participants (Osteopathic GME residency program directors) descriptions of their GME residency program characteristics and the achievement of initial accreditation under the new SAS requirements. The Qualtrics survey
instrument was utilized for data gathering and coding conversion of responses into numeric format. Once survey responses were coded, numeric data were exported to the Statistical Package for Social Sciences (SPSS) statistical software packages for analysis. Descriptive analysis was used to help describe associations between constructs.

**Purpose of the Survey Questions:**

Q1- Verifies survey participant’s current GME role/position (GME director primary care program, GME director specialty program, GME fellowship director, sub specialty program, former GME program director, other)

Q2- Identifies how many years the survey participant has served as a GME program director (whole number of years)

Q3- Identifies total number of residents or fellows in their GME Program Director’s assigned program (whole number)

Q4- Identifies program director medical degree designation (MD or DO)

Q5- Discloses presence of a GME co-director in their program (yes or no)

Q6- Defines geographic location designation (urban or rural)

Q7- Determines affiliation with a research college or university (yes or no)

Q8- Describes GME Sponsor institution tax designation (for profit or not for profit)

Q9- Discloses if CMS GME funding support is provided for their residency program (yes, no, not sure)
Q10- Describes GME Sponsor Institution facility structure (multi-facility health system, single acute care facility, community based facilities with multiple training site locations, other)

Q11- Discloses Sponsor Institution’s current GME accreditation status (ACGME accredited only, dually accredited by AOA and ACGME, AOA accredited only, pre-accredited under SAS, other)

Q12- Provides number of residents that matriculate each year from GME program (whole number)

Q13- Provides number of full-time faculty (FTE) that teaches in their GME program (whole number)

Q14- Provides number of faculty members that is not paid a salary for their GME duties (whole number)

Q15- Identifies the types of training currently offered to GME Program Faculty (teaching assessments, evidence-based medicine, team building skills, research methods, and scientific writing skills)

Q16- Identifies current GME Program requirements of Residency Program Faculty members (must maintain personal continuous specialty certification, receive competitive research funding, be ABMS certified, provide access to sub-board-certified subspecialty faculty)
Q17- Discloses GME Program Director duties, activities and responsibilities (designated as principal program faculty, responsible for all aspects of GME program, scholarly productivity, paid, protected time to administer GME program, maintain records of resident’s clinical service and educational activities)

Q18- Discloses GME Program Coordinator duties and responsibilities (Resident support activities, board communications, medical malpractice coverage, medical licensure, program faculty personnel file maintenance, program residents personnel file maintenance, GME program accreditation coordination, National Residency Matching Program (NRMP) coordination)

Q19- Discloses if GME program residents log more than 80 hours per week (yes or no)

Q20- Identifies GME resident access to designated GME faculty, facilities and support services (Quality Improvement Projects (QIPS) as part of didactic training in support of Center of Medicare & Medicaid Services (CMS), team-based quality improvement projects, real-world aspects of patient safety investigation/root cause analysis and failure modes and effects analysis, Clinical Learning Environment Review (CLER) program training determining the quality of the hospital/health system and workplace, collaboration engagement of residents within the clinical system, Joint Commission's national patient safety goals training, residents working with local health facilities safety and quality initiatives)

Q21- Identifies subject areas currently taught to GME residents (access to simulation labs to practice procedural and communications skills such as huddles and crew resource management, access to a research facility as part of their GME training, access to research
faculty as part of their GME training, access to program support service personnel, access to other GME residency programs if required in their training)

Q22- Discloses GME program cost analysis activities or intentions related to pivot to SAS (in the process of conducting detailed program cost analysis related to SAS, have conducted detailed program cost analysis related to SAS, will require outside consulting to conduct a detailed cost analysis related to SAS, do not plan to conduct a detailed program cost analysis related to SAS)

Q23- Discloses directors perceived impact of SAS on the future size of the GME residency program (plan to maintain same number residents, plan to reduce number of residents, plan to expand number of residents if permitted, plan to discontinue residency program, uncertain of the future disposition of GME program at this time)

Q24- Discloses GME program directors’ perceived significant benefits of the new SAS (maintains consistent evaluation and accountability for competency of resident physicians across all accredited graduate medical education programs, eliminates duplication in GME accreditation, achieves efficiencies and cost savings for institutions currently sponsoring "dually" or "parallel" accredited allopathic and osteopathic programs, ensures all residencies and fellowship applicants are eligible to enter all accredited programs in the United States, and can transfer from one accredited program to another without repeating training and without causing the Sponsoring Institution to lose Medicare funding)
Figure 6: *Source ACGME Website 2017*

Q25- Discloses GME program directors’ perceived ability to operate without CMS funding (definitely yes, probably yes, not sure, probably not, definitely not)

Q26- Identifies the current GME program status as to “initial accreditation” having been achieved related to SAS (not yet decided if we will apply to SAS, been granted “Initial Accreditation” status under SAS after our ACGME Review Committee site visit, been assigned “Continued Pre-Accreditation Status” under SAS after our ACGME Review Committee site visit, already submitted our SAS and have been assigned “Pre-Accreditation Status” but no ACGME Review Committee site visit has taken place yet, do not plan to apply to SAS, in the process of applying to SAS but not yet submitted our application, Other (please describe).
**Measures**

Any effects of the independent variables on the dependent variable were measured using cross tabulation chi-square statistical analysis. Pearson’s chi-squared test ($\chi^2$) was applied as a statistical test for categorical data to evaluate how likely it is that any observed difference between the sets arose by chance.

\[
\chi^2 = \sum \frac{(O - E)^2}{E}
\]

$\chi^2$ = the test statistic  \( \sum \) = the sum of

\( O \) = Observed frequencies  \( E \) = Expected frequencies

Figure E
Source: http://www.theseashore.org.uk/theseashore/Stats%20for%20twits/Chi-Squared.html

Chi-square does not describe strength or direction of relationship differences. It requires three basic assumptions of:

1. Random sample

2. Adequate sample size (30 plus)

3. Adequate cell count (5 minimum per cell).

The chi-square test of independence is an approximate test so a significance value $p$ is calculated with Fisher's Exact Test. The outcome is measured with a single dichotomous dependent variable. These statistical measures are then used to assist in answering research question and test hypotheses.
Research Design

The principle reference utilized for the study structure was Social Science Research Principles, Methods, and Practices by Anol Bhattacherjee, Ph.D. (Bhattacherjee 2012). The research design of this cross-sectional field survey study was non-experimental and correlational. This research did not attempt to manipulate independent variable constructs. A single questionnaire was used to gather both multiple independent variables (IVs) and the single dichotomous dependent variable (DV) data during the same time period. This field survey design created an opportunity to control many variables resulting in the potential for increased external validity. Reduced internal validity risk existed due to potential for respondent biases which can make inferences difficult.

Procedures

The survey data were gathered from June 8 to June 30, 2017. A total of three reminders were sent during the survey period to encourage participation.

The dependent variable (DV) of this study resided in Q26 element 6. Only participant surveys that included a response to Q26 could be utilized in results.

\[
\text{DV = GME Residency Program Granted “Initial Accreditation” status under the new Single Accreditation System (SAS) by ACGME}
\]

Responses to Q26 elements 1, 2, 3, 4 and 5 indicated Initial SAS Accreditation status had not yet been achieved at the time of survey.

Only Q26 element 6 response indicated Initial SAS Accreditation achievement.
Survey questions housing categorical independent variable elements were then cross
tabulated and chi square calculations for goodness of fit conducted. These questions
include: 1, 4, 5, 6, 7, 8, 9, 10, 11, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24 and 25.

Survey questions 15, 16, 17, 18, 20, and 21 allowed participants to enter multiple
responses. Each of the response elements for these questions was cross tabulated to the DV
individually and then as a composite score using chi square calculations for goodness
of fit analysis.

Example for Survey Question 15:

Q15 element 1 teaching assessments (IV) and Q26 element 6 (DV)
Q15 element 2 evidence-based medicine (IV) and Q26 element 6 (DV)
Q15 element 3 team building skills (IV) and Q26 element 6 (DV)
Q15 element 4 research methods (IV) and Q26 element 6 (DV)
Q15 element 5 scientific writing skills (IV) and Q26 element 6 (DV)

All 5 elements in Question 15 were analyzed individual. The same methodology was
employed for all multi-response categorical questions. This structure helped to reduce the
number of questions required for the survey without affecting the number of independent
variables that could be measured against the dependent variable.

Questions 2, 3, 12, 13 and 14 all contain numeric responses and descriptive statistics was
run used to help describe numeric data using central tendency calculations.
During analysis phase, each unique survey data element was associated with a research question. Analysis of data was conducted and presented in results section as follows.

**Research Question 1:** What general shared characteristics are associated with current osteopathic GME programs that have already achieved “initial program accreditation” under the new Single Accreditation System?

Data derived from survey questions and analysis using SPSS:

**Survey Question 1**

*Description of IV categories as numbers and percentages for GME Program SAS Accredited and those who are not yet SAS Accredited including category totals*

*Cross tabulation of IV with DV including comparison of column proportion using z-score proportion testing*

*Pearson’s Chi-square test*

*Bar Graph representation of DV against IVs*

**Survey Question 2**

*Mean and Standard Deviation*

*Skewness and Kurtosis*

**Survey Question 3**

*Mean and Standard Deviation*
Skewness and Kurtosis

**Survey Question 4**

*Description of IV categories as numbers and percentages for GME Program SAS Accredited and those who are not yet SAS Accredited including category totals*

*Cross tabulation of IV with DV including comparison of column proportion using z-score proportion testing*

*Pearson’s Chi-square test*

*Bar Graph representation of DV against IVs*

**Survey Question 6**

*Description of IV categories as numbers and percentages for GME Program SAS Accredited and those who are not yet SAS Accredited including category totals*

*Cross tabulation of IV with DV including comparison of column proportion using z-score proportion testing*

*Pearson’s Chi-square test*

*Bar Graph representation of DV against IVs*

**Survey Question 7**

*Description of IV categories as numbers and percentages for GME Program SAS Accredited and those who are not yet SAS Accredited including category totals*
Cross tabulation of IV with DV including comparison of column proportion using z-score proportion testing

Pearson’s Chi-square test

Bar Graph representation of DV against IVs

Survey Question 8

Description of IV categories as numbers and percentages for GME Program SAS Accredited and those who are not yet SAS Accredited including category totals

Cross tabulation of IV with DV including comparison of column proportion using z-score proportion testing

Pearson’s Chi-square test

Bar Graph representation of DV against IVs

Survey Question 9

Description of IV categories as numbers and percentages for GME Program SAS Accredited and those who are not yet SAS Accredited including category totals

Cross tabulation of IV with DV including comparison of column proportion using z-score proportion testing

Pearson’s Chi-square test

Bar Graph representation of DV against IVs
**Survey Question 10**

*Description of IV categories as numbers and percentages for GME Program SAS Accredited and those who are not yet SAS Accredited including category totals*

*Cross tabulation of IV with DV including comparison of column proportion using z-score proportion testing*

*Pearson’s Chi-square test*

*Bar Graph representation of DV against IVs*

**Survey Question 11**

*Description of IV categories as numbers and percentages for GME Program SAS Accredited and those who are not yet SAS Accredited including category totals*

*Cross tabulation of IV with DV including comparison of column proportion using z-score proportion testing*

*Pearson’s Chi-square test*

*Bar Graph representation of DV against IVs*

**Survey Question 13**

*Mean and Standard Deviation*

*Skewness and Kurtosis Survey*
Question 14

Mean and Standard Deviation

Skewness and Kurtosis

Survey Question 16

Description of IV categories as numbers and percentages for GME Program SAS Accredited and those who are not yet SAS Accredited including category totals

Cross tabulation of IV with DV including comparison of column proportion using z-score proportion testing

Pearson’s Chi-square test

Bar Graph representation of DV against IVs

Survey Question 19

Description of IV categories as numbers and percentages for GME Program SAS Accredited and those who are not yet SAS Accredited including category totals

Cross tabulation of IV with DV including comparison of column proportion using z-score proportion testing

Pearson’s Chi-square test

Bar Graph representation of DV against IVs
Survey Question 26

Description of IV categories as numbers and percentages for GME Program SAS Accredited and those who are not yet SAS Accredited including category totals

Cross tabulation of IV with DV including comparison of column proportion using z-score proportion testing

Pearson's Chi-square test

Bar Graph representation of DV against IVs

Summary of Survey Questions Associated with Research Question 1: 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 13, 14, 16, 19

Research Question 2: Which curriculum elements are most prevalent in osteopathic GME programs that have already achieved “initial program accreditation” under the Single Accreditation System? Data derived from survey questions and analysis using SPSS:

Survey Question 20

Description of IV categories as numbers and percentages for GME Program SAS Accredited and those who are not yet SAS Accredited including category totals

Cross tabulation of IV with DV including comparison of column proportion using z-score proportion testing

Pearson's Chi-square test
Bar Graph representation of DV against IVs

Survey Question 21

Description of IV categories as numbers and percentages for GME Program SAS
Accredited and those who are not yet SAS Accredited including category totals

Cross tabulation of IV with DV including comparison of column proportion using z-score proportion testing

Pearson's Chi-square test

Bar Graph representation of DV against IVs

Summary of Survey Questions Associated with Research Question 2:

20 & 21

Research Question 3: How do osteopathic GME program directors and assigned faculty characteristics impact the attainment of “initial program accreditation” under the Single Accreditation System?

Data derived from survey questions and analysis using SPSS:

Survey Question 5

Description of IV categories as numbers and percentages for GME Program SAS
Accredited and those who are not yet SAS Accredited including category totals

Cross tabulation of IV with DV including comparison of column proportion using z-score proportion testing
Pearson’s Chi-square test

Bar Graph representation of DV against IVs

Survey Question 15

Description of IV categories as numbers and percentages for GME Program SAS Accredited and those who are not yet SAS Accredited including category totals

Cross tabulation of IV with DV including comparison of column proportion using z-score proportion testing

Pearson’s Chi-square test

Bar Graph representation of DV against IVs

Survey Question 16

Description of IV categories as numbers and percentages for GME Program SAS Accredited and those who are not yet SAS Accredited including category totals

Cross tabulation of IV with DV including comparison of column proportion using z-score proportion testing

Pearson’s Chi-square test

Bar Graph representation of DV against IVs

Survey Question 17

Description of IV categories as numbers and percentages for GME Program SAS Accredited and those who are not yet SAS Accredited including category totals
Cross tabulation of IV with DV including comparison of column proportion using z-score proportion testing

Pearson’s Chi-square test

Bar Graph representation of DV against IVs

Summary of Survey Questions Associated with Research Question 3: 5, 15, 16 & 17

Research Question 4: How do osteopathic GME program directors expressed expectations for achievement of the four ACGME published “goals and benefits” for the new Single Accreditation System (SAS) relate to actual achievement of “initial program accreditation” under the Single Accreditation System?

Data derived from survey questions and analysis using SPSS:

Survey Question 24

Description of IV categories as numbers and percentages for GME Program SAS Accredited and those who are not yet SAS Accredited including category totals

Cross tabulation of IV with DV including comparison of column proportion using z-score proportion testing

Pearson's Chi-square test

Bar Graph representation of DV against IVs
**Research Question 5:** How does conducting financial due diligence related to the potential fiscal impacts of the new Single Accreditation System on osteopathic GME programs impact achievement of “initial program accreditation” under SAS?

Data derived from survey questions and analysis using SPSS:

**Survey Question 22**

*Description of IV categories as numbers and percentages for GME Program SAS Accredited and those who are not yet SAS Accredited including category totals*

*Cross tabulation of IV with DV including comparison of column proportion using z-score proportion testing*

*Pearson’s Chi-square test*

*Bar Graph representation of DV against IVs*

**Survey Question 23**

*Description of IV categories as numbers and percentages for GME Program SAS Accredited and those who are not yet SAS Accredited including category totals*

*Cross tabulation of IV with DV including comparison of column proportion using z-score proportion testing*

*Pearson's Chi-square test*

*Bar Graph representation of DV against IVs*
Survey Question 25

Description of IV categories as numbers and percentages for GME Program SAS Accredited and those who are not yet SAS Accredited including category totals

Cross tabulation of IV with DV including comparison of column proportion using z-score proportion testing

Pearson’s Chi-square test

Bar Graph representation of DV against IVs

Summary of Survey Questions

Finally, a determination to either fail to reject the null hypothesis or accept the alternative hypothesis associated with each research question was made based upon the data gathered and statistical analysis of significance calculation results. Interpretation of the practical information gathered is introduced as models.

Data Analysis Research Questions and Hypotheses

Five (5) research questions posed in this study. Four of the five research questions had a set of null and alternative hypotheses as each element stood alone. The survey instrument was designed so that specific survey questions and responses were assigned to a specific research question to support either the failure to reject the null hypothesis or the acceptance of the alternative.
Research Question 1: What general shared characteristics are associated with current osteopathic GME programs that have already achieved “initial program accreditation” under the new Single Accreditation System?

Research Question 2: Which curriculum elements are most prevalent in osteopathic GME programs that have already achieved “initial program accreditation” under the Single Accreditation System?

H0 = There are no significant differences between the prevalence of curriculum elements of those Osteopathic Graduate Medical Education (GME) residency programs which have already successfully made the “pivot” from AOA accreditation to the new Single Accreditation System (SAS) accreditation under ACGME standards and those programs which have not yet achieved SAS accreditation.

H1 = There are significant differences between the prevalence of curriculum elements of those Osteopathic Graduate Medical Education (GME) residency programs which have already successfully made the “pivot” from AOA accreditation to the new Single Accreditation System (SAS) accreditation under ACGME standards and those programs which have not yet achieved SAS accreditation.

Research Question 3: How do osteopathic GME program directors and assigned faculty characteristics impact the attainment of “initial program accreditation” under the Single Accreditation System?

H0 = There are no significant differences between program director and faculty characteristics of those Osteopathic Graduate Medical Education (GME) residency
programs which have already successfully made the “pivot” from AOA accreditation to the new Single Accreditation System (SAS) accreditation under ACGME standards and those programs which have not yet achieved SAS accreditation.

**H1** = There *are significant differences* between program director and characteristics of those Osteopathic Graduate Medical Education (GME) residency programs which have already successfully made the “pivot” from AOA accreditation to the new Single Accreditation System (SAS) accreditation under ACGME standards and those programs which have not yet achieved SAS accreditation.

**Research Question 4:** How do osteopathic GME program directors expressed expectations for achievement of the four ACGME published “goals and benefits” for the new Single Accreditation System (SAS) relate to actual achievement of “initial program accreditation” under the Single Accreditation System?

**H0** = There is *no significant difference* between GME programs likelihood of achievement of “initial program accreditation” under the Single Accreditation System based upon the program director’s expressed expectation for achievement of the ACGME published “goals and benefits”.

**H1** = There is a *significant difference* between GME programs likelihood of achievement of “initial program accreditation” under the Single Accreditation System based upon the program director’s expressed expectation for achievement of the ACGME published “goals and benefits”.
**Research Question 5:** How does conducting financial due diligence related to the potential fiscal impacts of the new Single Accreditation System on osteopathic GME programs impact achievement of “initial program accreditation” under SAS?

**H₀ =** Conducting financial due diligence related to the potential fiscal impacts of the new Single Accreditation System on osteopathic GME programs has no significant impact on achievement “initial program accreditation” under the Single Accreditation System.

**H₁ =** Conducting financial due diligence related to the potential fiscal impacts of the new Single Accreditation System on osteopathic GME programs has significant impact on achievement “initial program accreditation” under the Single Accreditation System.

**Study Limitations**

Selecting GME Program Directors as survey targets came with inherent limitations. These physician leaders are very busy professionals. The osteopathic GME program transition to SAS could be an emotionally charged issue for some program directors facing compliance with new requirements that may have led to an unwillingness and/or time-limited inability to participate in the research. Some program directors viewed taking the survey as “undue risk” and foregone it completely even though respondent’s identities and sponsor institutions remained anonymous per Institutional Review Board (IRB) requirements and study design disclosures. Those who elected to respond to the survey could be biased by the fact they are early adopters. Those program directors who had already achieved SAS status maybe more willing to share their experience than others who had not yet done so. Certain specialty group could have been over or under represented. The small sample size of N=35 created a challenge in meeting chi-square cross tabulation requirements (5 items
minimum per cell) in seeking statistical significance.
Chapter Four

Results

The survey data results are organized and presented in association with the relevant research question. Descriptive statistics are presented first followed by cross tabulation of the dichotomous dependent variable with each of the independent variables. Chi-square calculations describing goodness of fit appears next followed by graphic representation of DV and IV by category. All limitations of assumptions of data analysis are noted below calculations.

Definition of DV:

Final Status = 1 (Initial SAS Accreditation has been achieved)

Final Status = 0 (Initial SAS Accreditation has not yet been achieved)

Definition of IV:

Yes or Affirmative = 1

No or Negative = 0

Categorical Information as described

For ease of review, results for each variable being measured appear on a single page.
Research Questions and Hypotheses

Five (5) research questions were posed in this study and four had a null and alternative hypothesis. The survey instrument was designed so that specific survey questions and responses were specifically assigned to a research question to support either the failure to reject the null hypothesis or the accepting of the alternative.

Research Question 1: What general shared characteristics are associated with current osteopathic GME programs that have already achieved “initial program accreditation” under the new Single Accreditation System?

Contributing Results Elements RQ1

Figure Independent variable cross-tabulated against dependent variable

7 .............................................. Type of GME Programs Represented in Study Group
8 ......................................................................................... Program Geographic Locations
9 ......................................................................................... Program Sponsor Organization Tax Designation
10 ........................................................................ Program Sponsor Organization Description
11 .............................................................. Dually Accredited (AOA and ACGME) Programs
12 ........................................................................ Presence of CMS Direct and Indirect Funding
13 .............................................................................................. Degree Types of Program Directors
14 ......................................................................................... Program Research Facility Affiliations
15 .......................................................... Residents maintain 80 Hours per Week Duty Time
16 ................................................................................. Program has Competitive Research Funding
Types of Osteopathic GME Programs Represented in Study Group: Figure 7, RQ1

<table>
<thead>
<tr>
<th>Program Type</th>
<th>SAS Accredited</th>
<th>Not SAS Accredited</th>
<th>Cat Total</th>
<th>Cat Percent</th>
</tr>
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<tr>
<td></td>
<td>22 total</td>
<td>13 total</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>Fellowship</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td>Prim Care</td>
<td>7</td>
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<tr>
<td>Specialist</td>
<td>14</td>
<td>27</td>
<td>27</td>
<td>77%</td>
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Final Status * Current Role Cross tabulation

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<th>Count</th>
<th>Count</th>
<th>Count</th>
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<td>14_3</td>
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Each subscript letter denotes a subset of Current Role categories whose column proportions do not differ significantly from each other at the .05 level.

Chi-Square Tests

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<th>Value</th>
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<th>Asymptotic Significance (2-sided)</th>
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</thead>
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<tr>
<td>Pearson Chi-Square</td>
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<td>2</td>
<td>.047</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>8.787</td>
<td>2</td>
<td>.012</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>35</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* a. 4 cells (66.7%) have expected count less than 5. The minimum expected count is .37
Types of Geographic Locations: Figure 8, RQ1

<table>
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<th>Location</th>
<th>SAS Accredited</th>
<th>SAS Accredited Percent of Sample</th>
<th>Not SAS Accredited</th>
<th>Not Yet SAS Accredited Percent of Sample</th>
<th>Cat Total</th>
<th>Cat Percent</th>
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</thead>
<tbody>
<tr>
<td>Rural</td>
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<td>2</td>
<td>33%</td>
<td>6</td>
<td>17%</td>
</tr>
<tr>
<td>Urban</td>
<td>18</td>
<td>62%</td>
<td>11</td>
<td>38%</td>
<td>29</td>
<td>83%</td>
</tr>
</tbody>
</table>

Final Status * Geo Location Cross tabulation

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<th>Urban</th>
<th>Total</th>
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</thead>
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<td>11&lt;sub&gt;a&lt;/sub&gt;</td>
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<td>10.8</td>
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<td>1</td>
<td>Count</td>
<td>4&lt;sub&gt;a&lt;/sub&gt;</td>
<td>18&lt;sub&gt;a&lt;/sub&gt;</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>3.8</td>
<td>18.2</td>
<td>22.0</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>6</td>
<td>29</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>6.0</td>
<td>29.0</td>
<td>35.0</td>
</tr>
</tbody>
</table>

Each subscript letter denotes a subset of GeoLocation categories whose column proportions do not differ significantly from each other at the .05 level.

Chi-Square Tests

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>.045&lt;sup&gt;b&lt;/sup&gt;</td>
<td>1</td>
<td>.832</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuity Correction</td>
<td>.000</td>
<td>1</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>.046</td>
<td>1</td>
<td>.831</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fisher's Exact Test</td>
<td></td>
<td></td>
<td>1.000</td>
<td></td>
<td>.608</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 2.23.
b. Computed only for a 2x2 table
GME Program Sponsor Organization Tax Designation: Figure 9, RQ1

<table>
<thead>
<tr>
<th>Physician</th>
<th>SAS Accredited</th>
<th>Not SAS Accredited</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not for Profit</td>
<td>22 total</td>
<td>13 total</td>
</tr>
<tr>
<td>SAS Accredited</td>
<td>Percent of Sample</td>
<td>Percent of Sample</td>
</tr>
<tr>
<td>Not Yet SAS Accredited</td>
<td>68%</td>
<td>32%</td>
</tr>
<tr>
<td>Percent of Sample</td>
<td>10</td>
<td>31</td>
</tr>
<tr>
<td>Cat Total</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>Cat Percent</td>
<td>11%</td>
<td></td>
</tr>
</tbody>
</table>

For Profit | 25% | 75% | 4 | 89%

Final Status * Sponsor Inst Cross tabulation

<table>
<thead>
<tr>
<th>FinalStatus</th>
<th>Count</th>
<th>SponsorInst</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>ForProfit</td>
</tr>
<tr>
<td>0</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>Expected</td>
<td></td>
<td>1.5</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>21</td>
</tr>
<tr>
<td>Expected</td>
<td></td>
<td>2.5</td>
</tr>
<tr>
<td>Total</td>
<td>4</td>
<td>31</td>
</tr>
<tr>
<td>Expected</td>
<td></td>
<td>4.0</td>
</tr>
</tbody>
</table>

Each subscript letter denotes a subset of SponsorInst categories whose column proportions do not differ significantly from each other at the .05 level.

Chi-Square Tests

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>2.772&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1</td>
<td>.096</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuity Correction b</td>
<td>1.244</td>
<td>1</td>
<td>.265</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>2.696</td>
<td>1</td>
<td>.101</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fisher's Exact Test</td>
<td></td>
<td></td>
<td>.134</td>
<td>.134</td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 1.49.
b. Computed only for a 2x2 table
GME Program Sponsor Organization Description: Figure 10, RQ1

<table>
<thead>
<tr>
<th>Sponsor Description</th>
<th>SAS Accredited Percent of Sample</th>
<th>Not SAS Accredited Percent of Sample</th>
<th>Cat Total</th>
<th>Cat Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Sys</td>
<td>12 total</td>
<td>13 total</td>
<td>35</td>
<td>51%</td>
</tr>
<tr>
<td>Single Fac</td>
<td>4 total</td>
<td>2 total</td>
<td>6</td>
<td>17%</td>
</tr>
<tr>
<td>Community</td>
<td>6 total</td>
<td>2 total</td>
<td>8</td>
<td>23%</td>
</tr>
<tr>
<td>Other</td>
<td>1 total</td>
<td>2 total</td>
<td>32</td>
<td>9%</td>
</tr>
</tbody>
</table>

Final Status * Institutional Sponsor Cross tabulation

<table>
<thead>
<tr>
<th>Final Status</th>
<th>Institutional Sponsor</th>
<th>CFMTS</th>
<th>MFHS</th>
<th>Other</th>
<th>SACF</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Count</td>
<td>2ₐ</td>
<td>7ₐ</td>
<td>2ₐ</td>
<td>2ₐ</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>3.0</td>
<td>6.7</td>
<td>1.1</td>
<td>2.2</td>
<td>13.0</td>
</tr>
<tr>
<td>1</td>
<td>Count</td>
<td>6ₐ</td>
<td>11ₐ</td>
<td>1ₐ</td>
<td>4ₐ</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>5.0</td>
<td>11.3</td>
<td>1.9</td>
<td>3.8</td>
<td>22.0</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>8</td>
<td>18</td>
<td>3</td>
<td>6</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>8.0</td>
<td>18.0</td>
<td>3.0</td>
<td>6.0</td>
<td>35.0</td>
</tr>
</tbody>
</table>

Each subscript letter denotes a subset of Institutional Sponsor categories whose column proportions do not differ significantly from each other at the .05 level.

Chi-Square Tests

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>1.686</td>
<td>3</td>
<td>.640</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>1.668</td>
<td>3</td>
<td>.644</td>
</tr>
</tbody>
</table>

N of Valid Cases: 35

a. 5 cells (62.5%) have expected count less than 5. The minimum expected count is 1.11.
Dually Accredited (AOA and ACGME) Programs: Figure 11, RQ1

<table>
<thead>
<tr>
<th>Dual Acc</th>
<th>SAS Accredited</th>
<th>SAS Accredited Percent of Sample</th>
<th>Not SAS Accredited</th>
<th>Not Yet SAS Accredited Percent of Sample</th>
<th>Cat Total</th>
<th>Cat Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>18</td>
<td>78%</td>
<td>5</td>
<td>22%</td>
<td>23</td>
<td>66%</td>
</tr>
<tr>
<td>No</td>
<td>4</td>
<td>33%</td>
<td>8</td>
<td>67%</td>
<td>12</td>
<td>34%</td>
</tr>
</tbody>
</table>

Final Status * Sponsor Status Crosstabulation

<table>
<thead>
<tr>
<th>FinalStatus</th>
<th>Count</th>
<th>Expected Count</th>
<th>ACGMEonly</th>
<th>AOAonly</th>
<th>AOAonlySAS</th>
<th>dualaccredit</th>
<th>SASPreAccr</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>2a</td>
<td>2.2</td>
<td>2</td>
<td>1a</td>
<td>3a</td>
<td>5a</td>
<td>2a</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>13.0</td>
</tr>
<tr>
<td>1</td>
<td>4a</td>
<td>3.8</td>
<td>1.9</td>
<td>0a</td>
<td>0a</td>
<td>18a</td>
<td>0a</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>22.0</td>
</tr>
<tr>
<td>Total</td>
<td>6</td>
<td>6.0</td>
<td>3.0</td>
<td>23</td>
<td>2</td>
<td>35</td>
<td></td>
<td>35.0</td>
</tr>
</tbody>
</table>

Chi-Square Tests

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>12.529</td>
<td>4</td>
<td>.014</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>14.457</td>
<td>4</td>
<td>.006</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>35</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Each subscript letter denotes a subset of Sponsor Status categories whose column proportions do not differ significantly from each other at the .05 level.

a. 8 cells (80.0%) have expected count less than 5. The minimum expected count is .37.
## GME Program Received CMS direct and indirect funding:  Figure 12, RQ1

<table>
<thead>
<tr>
<th>CMS Funding</th>
<th>SAS Accredited</th>
<th>SAS Accredited Percent of Sample</th>
<th>Not SAS Accredited</th>
<th>Not Yet SAS Accredited Percent of Sample</th>
<th>Cat Total</th>
<th>Cat Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>19</td>
<td>61%</td>
<td>12</td>
<td>39%</td>
<td>31</td>
<td>89%</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>50%</td>
<td>1</td>
<td>50%</td>
<td>2</td>
<td>6%</td>
</tr>
<tr>
<td>Unsure</td>
<td>2</td>
<td>100%</td>
<td>0</td>
<td>0%</td>
<td>2</td>
<td>6%</td>
</tr>
</tbody>
</table>

### Final Status * CMS Support Cross tabulation

<table>
<thead>
<tr>
<th>FinalStatus</th>
<th>0 Count</th>
<th>1 Count</th>
<th>Unsure</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1&lt;sub&gt;a&lt;/sub&gt;</td>
<td>12&lt;sub&gt;a&lt;/sub&gt;</td>
<td>0&lt;sub&gt;a&lt;/sub&gt;</td>
<td>13</td>
</tr>
<tr>
<td>1</td>
<td>1&lt;sub&gt;a&lt;/sub&gt;</td>
<td>19&lt;sub&gt;a&lt;/sub&gt;</td>
<td>2&lt;sub&gt;a&lt;/sub&gt;</td>
<td>22</td>
</tr>
<tr>
<td>Total</td>
<td>2</td>
<td>31</td>
<td>2</td>
<td>35</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CMSSupport</th>
<th>0</th>
<th>1</th>
<th>Unsure</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>.7</td>
<td>11.5</td>
<td>.7</td>
<td>13.0</td>
</tr>
<tr>
<td>1</td>
<td>1.3</td>
<td>19.5</td>
<td>1.3</td>
<td>22.0</td>
</tr>
</tbody>
</table>

Each subscript letter denotes a subset of CMSSupport categories whose column proportions do not differ significantly from each other at the .05 level.

### Chi-Square Tests

<table>
<thead>
<tr>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>1.356&lt;sup&gt;a&lt;/sup&gt;</td>
<td>2</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>2.026</td>
<td>2</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>35</td>
<td></td>
</tr>
</tbody>
</table>

a. 4 cells (66.7%) have expected count less than 5. The minimum expected count is .74.
Types of Medical Degrees of Program Directors:  Figure 13, RQ1

<table>
<thead>
<tr>
<th>Physician</th>
<th>SAS Accredited</th>
<th>SAS Accredited Percent of Sample</th>
<th>Not SAS Accredited</th>
<th>Not Yet SAS Accredited Percent of Sample</th>
<th>Cat Total</th>
<th>Cat Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>MD</td>
<td>7</td>
<td>70%</td>
<td>3</td>
<td>30%</td>
<td>10</td>
<td>29%</td>
</tr>
<tr>
<td>DO</td>
<td>15</td>
<td>60%</td>
<td>10</td>
<td>40%</td>
<td>25</td>
<td>71%</td>
</tr>
</tbody>
</table>

Final Status * Deg Designation Cross tabulation

<table>
<thead>
<tr>
<th>FinalStatus</th>
<th>DegDesignation</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DO</td>
<td>MD</td>
</tr>
<tr>
<td>0</td>
<td>10&lt;sub&gt;a&lt;/sub&gt;</td>
<td>3&lt;sub&gt;a&lt;/sub&gt;</td>
</tr>
<tr>
<td>Expected Count</td>
<td>9.3</td>
<td>3.7</td>
</tr>
<tr>
<td>1</td>
<td>15&lt;sub&gt;a&lt;/sub&gt;</td>
<td>7&lt;sub&gt;a&lt;/sub&gt;</td>
</tr>
<tr>
<td>Expected Count</td>
<td>15.7</td>
<td>6.3</td>
</tr>
<tr>
<td>Total</td>
<td>25</td>
<td>10</td>
</tr>
<tr>
<td>Expected Count</td>
<td>25.0</td>
<td>10.0</td>
</tr>
</tbody>
</table>

Each subscript letter denotes a subset of DegDesignation categories whose column proportions do not differ significantly from each other at the .05 level.

Chi-Square Tests

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>.306&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1</td>
<td>.580</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuity Correction&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.028</td>
<td>1</td>
<td>.868</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>.312</td>
<td>1</td>
<td>.576</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fisher's Exact Test</td>
<td>.312</td>
<td>1</td>
<td>.576</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>35</td>
<td></td>
<td>.709</td>
<td>.440</td>
<td></td>
</tr>
</tbody>
</table>

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 3.71.
b. Computed only for a 2x2 table

Bar Chart
Research facility affiliations: Figure 14, RQ1

<table>
<thead>
<tr>
<th>Affiliation</th>
<th>SAS Accredited</th>
<th>SAS Accredited Percent of Sample</th>
<th>Not SAS Accredited</th>
<th>Not Yet SAS Accredited Percent of Sample</th>
<th>Cat Total</th>
<th>Cat Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>16</td>
<td>57%</td>
<td>12</td>
<td>28</td>
<td>80%</td>
</tr>
<tr>
<td></td>
<td>Not SAS</td>
<td>6</td>
<td>86%</td>
<td>1</td>
<td>7</td>
<td>20%</td>
</tr>
</tbody>
</table>

Final Status * Research Affiliation Cross tabulation

<table>
<thead>
<tr>
<th>FinalStatus</th>
<th>ResearchAffiliation</th>
<th>Count</th>
<th>0</th>
<th>1</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Count</td>
<td>12a</td>
<td>13</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>2.6</td>
<td>10.4</td>
<td>13.0</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Count</td>
<td>16a</td>
<td>22</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>4.4</td>
<td>17.6</td>
<td>22.0</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>7</td>
<td>28</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>7.0</td>
<td>28.0</td>
<td>35.0</td>
<td></td>
</tr>
</tbody>
</table>

Each subscript letter denotes a subset of ResearchAffiliation categories whose column proportions do not differ significantly from each other at the .05 level.

Chi-Square Tests

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>1.958a</td>
<td>1</td>
<td>.162</td>
<td>.220</td>
<td>.170</td>
</tr>
<tr>
<td>Continuity Correction</td>
<td>.925</td>
<td>1</td>
<td>.336</td>
<td>.220</td>
<td>.170</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>2.195</td>
<td>1</td>
<td>.138</td>
<td>.220</td>
<td>.170</td>
</tr>
<tr>
<td>Fisher's Exact Test</td>
<td></td>
<td></td>
<td></td>
<td>.220</td>
<td>.170</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>1.902</td>
<td>1</td>
<td>.168</td>
<td>.220</td>
<td>.170</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 2.60.
b. Computed only for a 2x2 table
Program Resident May Exceed 80 hours per Week Duty Time: Figure 15, RQ1

<table>
<thead>
<tr>
<th>Exceed 80 hours</th>
<th>SAS Accredited</th>
<th>Not SAS Accredited</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>2</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>No</td>
<td>20</td>
<td>10</td>
<td>30</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SAS Accredited</th>
<th>Percent of Sample</th>
<th>Not SAS Accredited</th>
<th>Percent of Sample</th>
<th>Cat Total</th>
<th>Cat Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>40%</td>
<td>13 total</td>
<td>60%</td>
<td>35</td>
<td>5</td>
<td>14%</td>
</tr>
<tr>
<td>67%</td>
<td>22 total</td>
<td>33%</td>
<td>35</td>
<td>10</td>
<td>86%</td>
</tr>
</tbody>
</table>

**Final Status * Exceed 80 Duty Hrs Cross tabulation**

<table>
<thead>
<tr>
<th>FinalStatus</th>
<th>Count</th>
<th>Exceed80DutyHrs</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>10a</td>
<td>3a</td>
<td>13</td>
</tr>
<tr>
<td>1</td>
<td>20a</td>
<td>2a</td>
<td>22</td>
</tr>
<tr>
<td>Total</td>
<td>30</td>
<td>5</td>
<td>35</td>
</tr>
</tbody>
</table>

Each subscript letter denotes a subset of Exceed80DutyHrs categories whose column proportions do not differ significantly from each other at the .05 level.

**Chi-Square Tests**

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>1.305</td>
<td>1</td>
<td>.253</td>
<td>1.262</td>
<td>.256</td>
</tr>
<tr>
<td>Continuity Correction</td>
<td>.413</td>
<td>1</td>
<td>.520</td>
<td>1.262</td>
<td>.520</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>1.259</td>
<td>1</td>
<td>.262</td>
<td>1.262</td>
<td>.262</td>
</tr>
<tr>
<td>Fisher's Exact Test</td>
<td></td>
<td></td>
<td>.337</td>
<td>.256</td>
<td>.337</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 1.86.
b. Computed only for a 2x2 table
GME Programs Receiving Competitive Research Funding: Figure 16, RQ1

<table>
<thead>
<tr>
<th>Research Funding</th>
<th>SAS Accredited</th>
<th>SAS Accredited Percent of Sample</th>
<th>Not SAS Accredited</th>
<th>Not Yet SAS Accredited Percent of Sample</th>
<th>Cat Total</th>
<th>Cat Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>1</td>
<td>100%</td>
<td>0</td>
<td>0%</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td>No</td>
<td>21</td>
<td>62%</td>
<td>13</td>
<td>38%</td>
<td>34</td>
<td>97%</td>
</tr>
</tbody>
</table>

Final Status * FReq Comp Research Funding Cross tabulation

<table>
<thead>
<tr>
<th>FinalStatus</th>
<th>FReqCompResearchFunding</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>FinalStatus</td>
<td>Count</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>13&lt;sub&gt;a&lt;/sub&gt;</td>
<td>0&lt;sub&gt;a&lt;/sub&gt;</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td></td>
</tr>
<tr>
<td></td>
<td>12.6</td>
<td>.4</td>
</tr>
<tr>
<td>1</td>
<td>Count</td>
<td></td>
</tr>
<tr>
<td></td>
<td>21&lt;sub&gt;a&lt;/sub&gt;</td>
<td>1&lt;sub&gt;a&lt;/sub&gt;</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td></td>
</tr>
<tr>
<td></td>
<td>21.4</td>
<td>.6</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td></td>
</tr>
<tr>
<td></td>
<td>34</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td></td>
</tr>
<tr>
<td></td>
<td>34.0</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Each subscript letter denotes a subset of FReqCompResearchFunding categories whose column proportions do not differ significantly from each other at the .05 level.

Chi-Square Tests

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>.608&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1</td>
<td>.435</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuity Correct&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.000</td>
<td>1</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>.946</td>
<td>1</td>
<td>.331</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fisher's Exact Test</td>
<td></td>
<td></td>
<td>1.000</td>
<td></td>
<td>.629</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>.591</td>
<td>1</td>
<td>.442</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is .37.
b. Computed only for a 2x2 table

Bar Chart
GME Program Number of Residents Mean = 16.31 Residents: Table A, RQ1

<table>
<thead>
<tr>
<th>Descriptive Statistics</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
<td>Std. Error</td>
</tr>
<tr>
<td>ResidentFellowNum</td>
<td>35</td>
<td>16.31</td>
<td>9.097</td>
<td>1.509</td>
<td>.398</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

GME Program Dir Number of Years of Service Mean = 9.17 Years: Table B, RQs 2 & 3

<table>
<thead>
<tr>
<th>Descriptive Statistics</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
<td>Std. Error</td>
</tr>
<tr>
<td>ServiceYrs</td>
<td>35</td>
<td>9.17</td>
<td>8.966</td>
<td>1.727</td>
<td>.398</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

GME Program Number of Full-time Paid Faculty Mean = 6.8 FTE: Table C, RQ 1, 3 & 5

<table>
<thead>
<tr>
<th>Descriptive Statistics</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
<td>Std. Error</td>
</tr>
<tr>
<td>FTENum</td>
<td>35</td>
<td>6.80</td>
<td>4.530</td>
<td>.833</td>
<td>.398</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

GME Program Number of Volunteer Faculty: Mean = 12.03 FTE: Table D, RQ 1, 3 & 5

<table>
<thead>
<tr>
<th>Descriptive Statistics</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
<td>Std. Error</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Research Question 2: Which curriculum elements are most prevalent in osteopathic GME programs that have already achieved “initial program accreditation” under the Single Accreditation System?

\[ H_0 = \text{There are no significant differences} \]

between the prevalence of curriculum elements of those Osteopathic Graduate Medical Education (GME) residency programs which have already successfully made the “pivot” from AOA accreditation to the new Single Accreditation System (SAS) accreditation under ACGME standards and those programs which have not yet achieved SAS accreditation.

\[ H_1 = \text{There are significant differences} \]

between the prevalence of curriculum elements of those Osteopathic Graduate Medical Education (GME) residency programs which have already successfully made the “pivot” from AOA accreditation to the new Single Accreditation System (SAS) accreditation under ACGME standards and those programs which have not yet achieved SAS accreditation.

Contributing Results Elements RQ2

Figure Independent variable cross-tabulated against dependent variable

17 .......................................................... Resident Access to a Research Facility
18 .......................................................... Resident Access to Research Faculty
19 .......................................................... Resident Access to Simulation Labs
20 .................................................. Resident Access to Other GME Programs
21 ................................................. Resident Access to GME Admin Program Support Personnel
22...... Residents Taught Quality Improvement & Patient Safety Competencies (QIPS)
23 ....................... Residents Conduct Team-based Quality Improvement Projects
24 ...................... Residents Taught Real-World Aspects of Patient Safety
25 ............... Residents Taught Clinical Learning Environment Review (CLER)
26 ............. Residents Taught Joint Commission National Patient Safety Standards
27 ........... Residents Participate in Local Health Facility Safety and Quality Initiatives
GME Program Residents Have Access to a Research Facility: Figure 17, RQ2

<table>
<thead>
<tr>
<th>SAS Accredited</th>
<th>SAS Accredited Percent of Sample</th>
<th>Not SAS Accredited</th>
<th>Not Yet SAS Accredited Percent of Sample</th>
<th>Cat Total</th>
<th>Cat Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes 10</td>
<td>71%</td>
<td>4</td>
<td>29%</td>
<td>14</td>
<td>40%</td>
</tr>
<tr>
<td>No 12</td>
<td>57%</td>
<td>9</td>
<td>43%</td>
<td>21</td>
<td>60%</td>
</tr>
</tbody>
</table>

Final Status * Curr Prov Rsrch Facility Access Cross tabulation

<table>
<thead>
<tr>
<th>FinalStatus</th>
<th>Count</th>
<th>CurrProvRsrchFacilityAccess</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td>9a</td>
<td>4a</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>7.8</td>
<td>5.2</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>12a</td>
<td>10a</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>13.2</td>
<td>8.8</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>21</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>21.0</td>
<td>14.0</td>
</tr>
</tbody>
</table>

Each subscript letter denotes a subset of CurrProvRsrchFacilityAccess categories whose column proportions do not differ significantly from each other at the .05 level.

Chi-Square Tests

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>.734*</td>
<td>1</td>
<td>.392</td>
<td>.311</td>
<td>.398</td>
</tr>
<tr>
<td>Continuity Correction b</td>
<td>.250</td>
<td>1</td>
<td>.617</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>.746</td>
<td>1</td>
<td>.388</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fisher’s Exact Test</td>
<td></td>
<td></td>
<td>.488</td>
<td></td>
<td>.311</td>
</tr>
<tr>
<td>Linear-by-Linear Assoc</td>
<td>.713</td>
<td>1</td>
<td>.398</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.20.
b. Computed only for a 2x2 table
GME Program Residents Have Access to a Research Faculty: Figure 18, RQ2

<table>
<thead>
<tr>
<th>Residents Research Faculty</th>
<th>SAS Accredited Percent of Sample</th>
<th>Not SAS Accredited Percent of Sample</th>
<th>Cat Total</th>
<th>Cat Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>16</td>
<td>11</td>
<td>27</td>
<td>77%</td>
</tr>
<tr>
<td>No</td>
<td>6</td>
<td>2</td>
<td>8</td>
<td>23%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FinalStatus * CurrProvRschrFacultyAccess Crosstabulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>CurrProvRschrFacultyAccess</td>
</tr>
<tr>
<td>FinalStatus</td>
</tr>
<tr>
<td>0</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Each subscript letter denotes a subset of CurrProvRschrFacultyAccess categories whose column proportions do not differ significantly from each other at the .05 level.

Chi-Square Tests

<table>
<thead>
<tr>
<th></th>
<th>Asymptotic Significance (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>df</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Chi-Square</td>
<td>.655a</td>
<td>.418</td>
<td></td>
</tr>
<tr>
<td>Continuity Correctionb</td>
<td>.154</td>
<td>.695</td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>.684</td>
<td>.408</td>
<td>.680</td>
</tr>
<tr>
<td>Fisher’s Exact Test</td>
<td></td>
<td></td>
<td>.355</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>.636</td>
<td>.425</td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>35</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 2.97.
b. Computed only for a 2x2 table
GME Program Residents Have Access to Simulation Labs: Figure 19, RQ2

<table>
<thead>
<tr>
<th>Residents Sim Labs</th>
<th>SAS Accredited</th>
<th>Percent of Sample</th>
<th>Not SAS Accredited</th>
<th>Percent of Sample</th>
<th>Cat Total</th>
<th>Cat Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>20</td>
<td>65%</td>
<td>11</td>
<td>35%</td>
<td>31</td>
<td>89%</td>
</tr>
<tr>
<td>No</td>
<td>2</td>
<td>50%</td>
<td>2</td>
<td>50%</td>
<td>4</td>
<td>11%</td>
</tr>
</tbody>
</table>

### Final Status * Curr Prov Simulation Lab Access Cross tabulation

<table>
<thead>
<tr>
<th>FinalStatus</th>
<th>CurrProvSimulationLabAccess</th>
<th>0</th>
<th>1</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Count</td>
<td>2a</td>
<td>11a</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>1.5</td>
<td>11.5</td>
<td>13.0</td>
</tr>
<tr>
<td>1</td>
<td>Count</td>
<td>2a</td>
<td>20a</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>2.5</td>
<td>19.5</td>
<td>22.0</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>4</td>
<td>31</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>4.0</td>
<td>31.0</td>
<td>35.0</td>
</tr>
</tbody>
</table>

Each subscript letter denotes a subset of CurrProvSimulationLabAccess categories whose column proportions do not differ significantly from each other at the .05 level.

### Chi-Square Tests

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>.320a</td>
<td>1</td>
<td>.572</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuity Correctionb</td>
<td>.000</td>
<td>1</td>
<td>.987</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>.310</td>
<td>1</td>
<td>.577</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fisher’s Exact Test</td>
<td></td>
<td></td>
<td></td>
<td>.618</td>
<td>.478</td>
</tr>
<tr>
<td>Linear-by-Linear Assoc.</td>
<td>.311</td>
<td>1</td>
<td>.577</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 1.49.

b. Computed only for a 2x2 table
GME Residents Have Access to Other GME Programs: Figure 20, RQ2

<table>
<thead>
<tr>
<th>Other GME Support</th>
<th>SAS Accredited</th>
<th>Not SAS Accredited</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent of Sample</td>
<td>Percent of Sample</td>
</tr>
<tr>
<td>Yes</td>
<td>16 (59%)</td>
<td>11 (41%)</td>
</tr>
<tr>
<td>No</td>
<td>6 (75%)</td>
<td>1 (25%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cat Total</th>
<th>Cat Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>35</td>
<td>77%</td>
</tr>
<tr>
<td>8</td>
<td>23%</td>
</tr>
</tbody>
</table>

Final Status * Curr Prov Other GME Access Cross tabulation

<table>
<thead>
<tr>
<th>FinalStatus</th>
<th>Count</th>
<th>Expected Count</th>
<th>CurrProvOtherGMEAccess</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>2a</td>
<td>3.0</td>
<td>1a</td>
</tr>
<tr>
<td>1</td>
<td>6a</td>
<td>5.0</td>
<td>16a</td>
</tr>
<tr>
<td>Total</td>
<td>8</td>
<td>8.0</td>
<td>27</td>
</tr>
</tbody>
</table>

Each subscript letter denotes a subset of CurrProvOtherGMEAccess categories whose column proportions do not differ significantly from each other at the .05 level.

<table>
<thead>
<tr>
<th></th>
<th>Asymptotic Significance (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>.655a</td>
<td>.418</td>
<td></td>
</tr>
<tr>
<td>Continuity Correction</td>
<td>.154</td>
<td>.695</td>
<td>.680</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>.684</td>
<td>.408</td>
<td>.355</td>
</tr>
<tr>
<td>Fisher's Exact Test</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>.636</td>
<td>.425</td>
<td></td>
</tr>
</tbody>
</table>

N of Valid Cases 35

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 2.97.
b. Computed only for a 2x2 table.
Residents Have Access to GME Admin Program Support Personnel: Figure 21, RQ2

<table>
<thead>
<tr>
<th>Residents Admin Support</th>
<th>SAS Accredited 22 total</th>
<th></th>
<th>Not SAS Accredited 13 total</th>
<th></th>
<th>Not Yet SAS Accredited Percent of Sample</th>
<th></th>
<th>Cat Total 35</th>
<th></th>
<th>Cat Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>18</td>
<td>62%</td>
<td></td>
<td></td>
<td>11</td>
<td>38%</td>
<td>29</td>
<td>83%</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>4</td>
<td>67%</td>
<td></td>
<td></td>
<td>2</td>
<td>33%</td>
<td>6</td>
<td>17%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Final Status * Curr Prov PSSP Access Cross tabulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>CurrProvPSSPAccess</td>
</tr>
<tr>
<td>FinalStatus</td>
</tr>
<tr>
<td>0</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Expected Count</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2.2</td>
<td>10.8</td>
<td>13.0</td>
<td></td>
</tr>
<tr>
<td>3.8</td>
<td>18.2</td>
<td>22.0</td>
<td></td>
</tr>
<tr>
<td>6.0</td>
<td>29.0</td>
<td>35.0</td>
<td></td>
</tr>
</tbody>
</table>

Each subscript letter denotes a subset of CurrProvPSSPAccess categories whose column proportions do not differ significantly from each other at the .05 level.
GME Residents Taught QIPS: Figure 22, RQ2

<table>
<thead>
<tr>
<th>Residents Taught QIPS</th>
<th>SAS Accredited</th>
<th>Not SAS Accredited</th>
<th>Cat Total</th>
<th>Cat Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>19</td>
<td>11</td>
<td>31</td>
<td>89%</td>
</tr>
<tr>
<td>No</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>11%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Final Status * Subject QIPS Cross tabulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SubjectQIPS</td>
</tr>
<tr>
<td>FinalStatus</td>
</tr>
<tr>
<td>0 Count</td>
</tr>
<tr>
<td>Expected Count</td>
</tr>
<tr>
<td>1 Count</td>
</tr>
<tr>
<td>Expected Count</td>
</tr>
<tr>
<td>Total Count</td>
</tr>
<tr>
<td>Expected Count</td>
</tr>
</tbody>
</table>

Each subscript letter denotes a subset of SubjectQIPS categories whose column proportions do not differ significantly from each other at the .05 level.

<table>
<thead>
<tr>
<th>Chi-Square Tests</th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>.285^a</td>
<td>1</td>
<td>.593</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuity Correction^b</td>
<td>.000</td>
<td>1</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>.300</td>
<td>1</td>
<td>.584</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fisher's Exact Test</td>
<td></td>
<td></td>
<td></td>
<td>1.000</td>
<td>.522</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>.277</td>
<td>1</td>
<td>.599</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 1.49.
b. Computed only for a 2x2 table
GME Residents Conduct Team-based Quality Improvement Projects: Figure 23, RQ2

<table>
<thead>
<tr>
<th>Residents Taught QI</th>
<th>SAS Accredited 22 total</th>
<th>SAS Accredited Percent of Sample</th>
<th>Not SAS Accredited 13 total</th>
<th>Not Yet SAS Accredited Percent of Sample</th>
<th>Cat Total 35</th>
<th>Cat Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>16</td>
<td>62%</td>
<td>10</td>
<td>38%</td>
<td>26</td>
<td>74%</td>
</tr>
<tr>
<td>No</td>
<td>6</td>
<td>67%</td>
<td>3</td>
<td>33%</td>
<td>9</td>
<td>26%</td>
</tr>
</tbody>
</table>

### Final Status * Subject Team based Cross tabulation

<table>
<thead>
<tr>
<th>Final Status</th>
<th>Subject Team based QI</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Count</td>
<td>3_a</td>
<td>10_b</td>
</tr>
<tr>
<td>Expected</td>
<td>3.3</td>
<td>9.7</td>
</tr>
<tr>
<td>Count</td>
<td>6_a</td>
<td>16_a</td>
</tr>
<tr>
<td>Expected</td>
<td>5.7</td>
<td>16.3</td>
</tr>
<tr>
<td>Total Count</td>
<td>9</td>
<td>26</td>
</tr>
<tr>
<td>Expected Count</td>
<td>9.0</td>
<td>26.0</td>
</tr>
</tbody>
</table>

Each subscript letter denotes a subset of Subject Team based QIP categories whose column proportions do not differ significantly from each other at the .05 level.

### Chi-Square Tests

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>.075a</td>
<td>1</td>
<td>.784</td>
<td>1.000</td>
<td>.557</td>
</tr>
<tr>
<td>Continuity Correctionb</td>
<td>.000</td>
<td>1</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>.076</td>
<td>1</td>
<td>.783</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fisher's Exact Test</td>
<td></td>
<td></td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>.073</td>
<td>1</td>
<td>.787</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 3.34.
b. Computed only for a 2x2 table
GME Residents Taught Real-World Aspects of Patient Safety: Figure 24, RQ2

<table>
<thead>
<tr>
<th>SAS Accredited</th>
<th>Not SAS Accredited</th>
<th>Cat Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residents Taught Pt Safe</td>
<td>Percent of Sample</td>
<td>Percent of Sample</td>
</tr>
<tr>
<td>Yes</td>
<td>17</td>
<td>61%</td>
</tr>
<tr>
<td>No</td>
<td>5</td>
<td>71%</td>
</tr>
</tbody>
</table>

**Final Status * Subject Real World Aspects Cross tabulation**

<table>
<thead>
<tr>
<th>FinalStatus</th>
<th>SubjectRealWorldAspects</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Count</td>
<td>2a</td>
<td>11a</td>
</tr>
<tr>
<td>Expected Count</td>
<td>2.6</td>
<td>10.4</td>
</tr>
<tr>
<td>1</td>
<td>Count</td>
<td>5a</td>
</tr>
<tr>
<td>Expected Count</td>
<td>4.4</td>
<td>17.6</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>7</td>
</tr>
<tr>
<td>Expected Count</td>
<td>7.0</td>
<td>28.0</td>
</tr>
</tbody>
</table>

Each subscript letter denotes a subset of SubjectRealWorldAspects categories whose column proportions do not differ significantly from each other at the .05 level.

### Chi-Square Tests

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>.275a</td>
<td>1</td>
<td>.600</td>
<td>.930</td>
<td></td>
</tr>
<tr>
<td>Continuity Correctionb</td>
<td>.008</td>
<td>1</td>
<td>.594</td>
<td></td>
<td>.475</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>.284</td>
<td>1</td>
<td>.594</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fisher's Exact Test</td>
<td></td>
<td></td>
<td>.689</td>
<td>.475</td>
<td></td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>.267</td>
<td>1</td>
<td>.605</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 2.60.

b. Computed only for a 2x2 table.
GME Residents Taught Clinical Learning Environment Review (CLER): Figure 25, RQ2

<table>
<thead>
<tr>
<th>Residents Taught CLER</th>
<th>SAS Accredited</th>
<th>Not SAS Accredited</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent of Sample</td>
<td>Percent of Sample</td>
</tr>
<tr>
<td>Yes</td>
<td>14</td>
<td>7</td>
</tr>
<tr>
<td>67%</td>
<td>33%</td>
<td>21</td>
</tr>
<tr>
<td>No</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>57%</td>
<td>43%</td>
<td>14</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Final Status * Subject CLER Cross tabulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SubjectCLER</td>
</tr>
<tr>
<td>FinalStatus</td>
</tr>
<tr>
<td>0</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Each subscript letter denotes a subset of SubjectCLER categories whose column proportions do not differ significantly from each other at the .05 level.

**Chi-Square Tests**

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>.326a</td>
<td>1</td>
<td>.568</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuity Correctionb</td>
<td>.046</td>
<td>1</td>
<td>.830</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>.325</td>
<td>1</td>
<td>.569</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fisher’s Exact Test</td>
<td></td>
<td></td>
<td></td>
<td>.724</td>
<td>.413</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>.317</td>
<td>1</td>
<td>.573</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.20.

b. Computed only for a 2x2 table.
GME Residents Participate in JT Commission National Pt Safety Trng: Figure 26, RQ2

<table>
<thead>
<tr>
<th>Residents Taught JC</th>
<th>SAS Accredited 22 total</th>
<th>SAS Accredited Percent of Sample</th>
<th>Not SAS Accredited 13 total</th>
<th>Not Yet SAS Accredited Percent of Sample</th>
<th>Cat Total 35</th>
<th>Cat Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>8</td>
<td>33%</td>
<td>7</td>
<td>47%</td>
<td>15</td>
<td>43%</td>
</tr>
<tr>
<td>No</td>
<td>14</td>
<td>70%</td>
<td>6</td>
<td>30%</td>
<td>20</td>
<td>57%</td>
</tr>
</tbody>
</table>

**Final Status * Subject Joint Commission Cross tabulation**

<table>
<thead>
<tr>
<th>FinalStatus</th>
<th>Count</th>
<th>Expected Count</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>6_a</td>
<td>7_a</td>
<td>13</td>
</tr>
<tr>
<td>1</td>
<td>14_a</td>
<td>8_a</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>15</td>
<td>35</td>
</tr>
</tbody>
</table>

Each subscript letter denotes a subset of SubjectJointCommision categories whose column proportions do not differ significantly from each other at the .05 level.

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>1.020&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1</td>
<td>.313</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuity Correction&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.431</td>
<td>1</td>
<td>.512</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>1.018</td>
<td>1</td>
<td>.313</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fisher's Exact Test</td>
<td></td>
<td></td>
<td>.481</td>
<td>.255</td>
<td></td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>.991</td>
<td>1</td>
<td>.320</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.57.

b. Computed only for a 2x2 table
GME Residents Participate in Local Health Fac Safe and Qual Initiatives: Figure 27, RQ2

<table>
<thead>
<tr>
<th>Residents Taught QIPS</th>
<th>SAS Accredited</th>
<th>SAS Accredited Percent of Sample</th>
<th>Not SAS Accredited</th>
<th>Not Yet SAS Accredited Percent of Sample</th>
<th>Cat Total</th>
<th>Cat Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>8</td>
<td>57%</td>
<td>6</td>
<td>43%</td>
<td>14</td>
<td>40%</td>
</tr>
<tr>
<td>No</td>
<td>14</td>
<td>67%</td>
<td>7</td>
<td>33%</td>
<td>21</td>
<td>60%</td>
</tr>
</tbody>
</table>

Final Status * Subject Local Medical Facility Cross tabulation

<table>
<thead>
<tr>
<th>FinalStatus</th>
<th>SubjectLocalMedicalFacility</th>
<th>0</th>
<th>1</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Count</td>
<td>7a</td>
<td>6a</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>7.8</td>
<td>5.2</td>
<td>13.0</td>
</tr>
<tr>
<td></td>
<td>Count</td>
<td>14a</td>
<td>8a</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>13.2</td>
<td>8.8</td>
<td>22.0</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>21</td>
<td>14</td>
<td>35</td>
</tr>
<tr>
<td>Total</td>
<td>Expected Count</td>
<td>21.0</td>
<td>14.0</td>
<td>35.0</td>
</tr>
</tbody>
</table>

Each subscript letter denotes a subset of SubjectLocalMedicalFacility categories whose column proportions do not differ significantly from each other at the .05 level.

Chi-Square Tests

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>.326a</td>
<td>1</td>
<td>.568</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuity Correctionb</td>
<td>.046</td>
<td>1</td>
<td>.830</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>.325</td>
<td>1</td>
<td>.569</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fisher's Exact Test</td>
<td></td>
<td></td>
<td></td>
<td>.724</td>
<td>.413</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>.317</td>
<td>1</td>
<td>.573</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.20.

b. Computed only for a 2x2 table
Research Question 3: *How do osteopathic GME program directors and assigned faculty characteristics impact the attainment of “initial program accreditation” under the Single Accreditation System?*

\( H_0 \) = There *are no significant differences* between program director and faculty characteristics of those Osteopathic Graduate Medical Education (GME) residency programs which have already successfully made the “pivot” from AOA accreditation to the new Single Accreditation System (SAS) accreditation under ACGME standards and those programs which have not yet achieved SAS accreditation.

\( H_1 \) = There *are significant differences* between program director and faculty characteristics of those Osteopathic Graduate Medical Education (GME) residency programs which have already successfully made the “pivot” from AOA accreditation to the new Single Accreditation System (SAS) accreditation under ACGME standards and those programs which have not yet achieved SAS accreditation.

**Contributing Results Elements RQ3**

Figure  Independent variable cross-tabulated against dependent variable

28 .......................... Director Designated Principal Responsible Faculty  
29 ............................ Programs with Co-Directors  
30 .............................................................. Scholarly Productivity  
31 ......................................................... Program Faculty Specialty Certified  
32 .......................................................... Faculty ABMS Certified  
33 ................................. Faculty Trained to Teach Evidence Based Medicine  
34 ........................................ Faculty Trained to Teach Research Methods  
35 ........................................ Faculty Trained to Teach Writing Skills  
36 ........................................... Faculty Trained to Teach Team Building Skills
GME Program Director Designated Principal Responsible Faculty: Figure 28, RQ3

<table>
<thead>
<tr>
<th>PGM Dir Responsible Principle</th>
<th>SAS Accredited</th>
<th>Not Yet SAS Accredited</th>
<th>Cat Total</th>
<th>Cat Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>22 total</td>
<td>13 total</td>
<td>35</td>
<td>83%</td>
</tr>
<tr>
<td>Yes</td>
<td>18</td>
<td>11</td>
<td>29</td>
<td>62%</td>
</tr>
<tr>
<td>No</td>
<td>4</td>
<td>2</td>
<td>6</td>
<td>67%</td>
</tr>
</tbody>
</table>

Percent of Sample

<table>
<thead>
<tr>
<th>Cat</th>
<th>Total</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>35</td>
<td></td>
<td>100%</td>
</tr>
<tr>
<td>18</td>
<td>62%</td>
<td>83%</td>
</tr>
<tr>
<td>22</td>
<td>38%</td>
<td>17%</td>
</tr>
</tbody>
</table>

Final Status * Pgm Dir Principal Pgm Faculty Cross tabulation

<table>
<thead>
<tr>
<th>FinalStatus</th>
<th>PgmDirPrincipalPgmFaculty</th>
<th>0</th>
<th>1</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Count</td>
<td>2</td>
<td>11</td>
<td>13</td>
</tr>
<tr>
<td>1</td>
<td>Count</td>
<td>4</td>
<td>18</td>
<td>22</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>6</td>
<td>29</td>
<td>35</td>
</tr>
</tbody>
</table>

Expected Count

<table>
<thead>
<tr>
<th>FinalStatus</th>
<th>PgmDirPrincipalPgmFaculty</th>
<th>0</th>
<th>1</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Expected Count</td>
<td>2.2</td>
<td>10.8</td>
<td>13.0</td>
</tr>
<tr>
<td>1</td>
<td>Expected Count</td>
<td>3.8</td>
<td>18.2</td>
<td>22.0</td>
</tr>
<tr>
<td>Total</td>
<td>Expected Count</td>
<td>6.0</td>
<td>29.0</td>
<td>35.0</td>
</tr>
</tbody>
</table>

Each subscript letter denotes a subset of PgmDirPrincipalPgmFaculty categories whose column proportions do not differ significantly from each other at the .05 level.

Chi-Square Tests

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>.045a</td>
<td>1</td>
<td>.832</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuity Correction</td>
<td>.000</td>
<td>1</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>.046</td>
<td>1</td>
<td>.831</td>
<td>1.000</td>
<td>.608</td>
</tr>
<tr>
<td>Fisher's Exact Test</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>.044</td>
<td>1</td>
<td>.834</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

N of Valid Cases

- 2 cells (50.0%) have expected count less than 5. The minimum expected count is 2.23.
- Computed only for a 2x2 table
Programs with Co-Directors: Figure 29, RQ3

![Bar Chart]

### Final Status * Prgm Co Dir Cross tabulation

<table>
<thead>
<tr>
<th>FinalStatus</th>
<th>PrgmCoDir</th>
<th>0</th>
<th>1</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Count</td>
<td>8a</td>
<td>5a</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>7.8</td>
<td>5.2</td>
<td>13.0</td>
</tr>
<tr>
<td>1</td>
<td>Count</td>
<td>13a</td>
<td>9a</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>13.2</td>
<td>8.8</td>
<td>22.0</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>21</td>
<td>14</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>21.0</td>
<td>14.0</td>
<td>35.0</td>
</tr>
</tbody>
</table>

Each subscript letter denotes a subset of PrgmCoDir categories whose column proportions do not differ significantly from each other at the .05 level.

### Chi-Square Tests

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>.020a</td>
<td>1</td>
<td>.886</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuity Correctionb</td>
<td>.000</td>
<td>1</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>.020</td>
<td>1</td>
<td>.886</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fisher's Exact Test</td>
<td></td>
<td></td>
<td>1.000</td>
<td>.587</td>
<td></td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>.020</td>
<td>1</td>
<td>.888</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.20.

b. Computed only for a 2x2 table
### GME Program Director Has Scholarly Productivity: Figure 30, RQ3

<table>
<thead>
<tr>
<th>PGM Dir Scholarly Production</th>
<th>SAS Accredited</th>
<th>SAS Accredited</th>
<th>Not Yet SAS Accredited</th>
<th>Not Yet SAS Accredited</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent of Sample</td>
<td>22 total</td>
<td>13 total</td>
<td>8</td>
<td>27 total</td>
</tr>
<tr>
<td>Yes</td>
<td>18</td>
<td>9</td>
<td>27</td>
<td>77%</td>
</tr>
<tr>
<td>No</td>
<td>4</td>
<td>4</td>
<td>8</td>
<td>23%</td>
</tr>
</tbody>
</table>

#### Final Status * Pgm Dir Scholarly Prod Cross tabulation

<table>
<thead>
<tr>
<th>FinalStatus</th>
<th>PgmDirScholarlyProd</th>
<th>0</th>
<th>1</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Count</td>
<td>4a</td>
<td>9a</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>3.0</td>
<td>10.0</td>
<td>13.0</td>
</tr>
<tr>
<td></td>
<td>Count</td>
<td>4a</td>
<td>18a</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>5.0</td>
<td>17.0</td>
<td>22.0</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>8</td>
<td>27</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>8.0</td>
<td>27.0</td>
<td>35.0</td>
</tr>
</tbody>
</table>

Each subscript letter denotes a subset of PgmDirScholarlyProd categories whose column proportions do not differ significantly from each other at the .05 level.

#### Chi-Square Tests

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>.734a</td>
<td>1</td>
<td>.392</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuity Correction</td>
<td>.194</td>
<td>1</td>
<td>.660</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>.718</td>
<td>1</td>
<td>.397</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fisher's Exact Test</td>
<td></td>
<td></td>
<td></td>
<td>.433</td>
<td>.325</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>.713</td>
<td>1</td>
<td>.398</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 2.97.

b. Computed only for a 2x2 table
GME Program Faculty Specialty Certified: Figure 31, RQ3

<table>
<thead>
<tr>
<th>Faculty Specialty Certified</th>
<th>SAS Accredited</th>
<th>SAS Accredited Percent of Sample</th>
<th>Not SAS Accredited</th>
<th>Not Yet SAS Accredited Percent of Sample</th>
<th>Cat Total</th>
<th>Cat Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>17</td>
<td>57%</td>
<td>13</td>
<td>43%</td>
<td>30</td>
<td>86%</td>
</tr>
<tr>
<td>No</td>
<td>5</td>
<td>100%</td>
<td>0</td>
<td>0%</td>
<td>5</td>
<td>14%</td>
</tr>
</tbody>
</table>

Final Status * FReq Sub Board Cert Cross tabulation

<table>
<thead>
<tr>
<th>FinalStatus</th>
<th>FReqSubBoardCert</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>FinalStatus</td>
<td>Count</td>
<td></td>
</tr>
<tr>
<td></td>
<td>12a</td>
<td>1a</td>
</tr>
<tr>
<td></td>
<td>11.9</td>
<td>1.1</td>
</tr>
<tr>
<td>FinalStatus</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>20a</td>
<td>2a</td>
</tr>
<tr>
<td></td>
<td>20.1</td>
<td>1.9</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>32.0</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Each subscript letter denotes a subset of FReqSubBoardCert categories whose column proportions do not differ significantly from each other at the .05 level.

Chi-Square Tests

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>.020</td>
<td>1</td>
<td></td>
<td>.886</td>
<td></td>
</tr>
<tr>
<td>Continuity Correction</td>
<td>.000</td>
<td>1</td>
<td></td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>.021</td>
<td>1</td>
<td></td>
<td>.886</td>
<td></td>
</tr>
<tr>
<td>Fisher’s Exact Test</td>
<td></td>
<td></td>
<td></td>
<td>1.000</td>
<td>.694</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>.020</td>
<td>1</td>
<td></td>
<td>.888</td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td></td>
<td>35</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 1.11.
b. Computed only for a 2x2 table
Program Faculty are ABMS certified: Figure 32, RQ3

<table>
<thead>
<tr>
<th>ABMS Cert</th>
<th>SAS Accredited</th>
<th>SAS Accredited</th>
<th>Not SAS Accredited</th>
<th>Not Yet SAS Accredited</th>
<th>Cat Total</th>
<th>Cat Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>8</td>
<td>73%</td>
<td>3</td>
<td>27%</td>
<td>11</td>
<td>31%</td>
</tr>
<tr>
<td>No</td>
<td>14</td>
<td>58%</td>
<td>10</td>
<td>42%</td>
<td>24</td>
<td>69%</td>
</tr>
</tbody>
</table>

### Final Status * FReq ABMS certified Cross tabulation

<table>
<thead>
<tr>
<th>FinalStatus</th>
<th>Count</th>
<th>Expected Count</th>
<th>Count</th>
<th>Expected Count</th>
<th>Total</th>
<th>Expected Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>10,1</td>
<td>8.9</td>
<td>3</td>
<td>4.1</td>
<td>13</td>
<td>13.0</td>
</tr>
<tr>
<td>1</td>
<td>14,2</td>
<td>15.1</td>
<td>8</td>
<td>6.9</td>
<td>22</td>
<td>22.0</td>
</tr>
<tr>
<td>Total</td>
<td>24</td>
<td>24.0</td>
<td>11</td>
<td>11.0</td>
<td>35</td>
<td>35.0</td>
</tr>
</tbody>
</table>

Each subscript letter denotes a subset of FReqABMScertified categories whose column proportions do not differ significantly from each other at the .05 level.

### Chi-Square Tests

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>.669a</td>
<td>1</td>
<td>.413</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuity Correction</td>
<td>.195</td>
<td>1</td>
<td>.659</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>.688</td>
<td>1</td>
<td>.407</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fisher's Exact Test</td>
<td>.688</td>
<td>1</td>
<td>.478</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>.650</td>
<td>1</td>
<td>.420</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 4.09.
b. Computed only for a 2x2 table
GME Program Faculty Trained to Teach Evidence Based Medicine: Figure 33, RQ3

<table>
<thead>
<tr>
<th>Faculty EBM</th>
<th>SAS Accredited</th>
<th>SAS Accredited Percent of Sample</th>
<th>Not SAS Accredited</th>
<th>Not Yet SAS Accredited Percent of Sample</th>
<th>Cat Total</th>
<th>Cat Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>14</td>
<td>67%</td>
<td>7</td>
<td>33%</td>
<td>21</td>
<td>60%</td>
</tr>
<tr>
<td>No</td>
<td>8</td>
<td>57%</td>
<td>6</td>
<td>43%</td>
<td>14</td>
<td>40%</td>
</tr>
</tbody>
</table>

Final Status * Trng Evidence BasedMed Cross tabulation

<table>
<thead>
<tr>
<th>FinalStatus</th>
<th>TrngEvidenceBasedMed</th>
<th>0</th>
<th>1</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Count</td>
<td>5\textsubscript{a}</td>
<td>8\textsubscript{a}</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>3.0</td>
<td>10.0</td>
<td>13.0</td>
</tr>
<tr>
<td>1</td>
<td>Count</td>
<td>3\textsubscript{a}</td>
<td>19\textsubscript{a}</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>5.0</td>
<td>17.0</td>
<td>22.0</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>8</td>
<td>27</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>8.0</td>
<td>27.0</td>
<td>35.0</td>
</tr>
</tbody>
</table>

Each subscript letter denotes a subset of TrngEvidenceBasedMed categories whose column proportions do not differ significantly from each other at the .05 level.

Chi-Square Tests

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>2.856 \textsuperscript{a}</td>
<td>1</td>
<td>.091</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuity Correction \textsuperscript{b}</td>
<td>1.622</td>
<td>1</td>
<td>.203</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>2.779</td>
<td>1</td>
<td>.095</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fisher's Exact Test</td>
<td>2.779</td>
<td>1</td>
<td>.116</td>
<td>.103</td>
<td></td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>2.774</td>
<td>1</td>
<td>.096</td>
<td></td>
<td>.103</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 2.97.
b. Computed only for a 2x2 table
GME Program Faculty Trained to Teach Research Methods: Figure 34, RQ3

<table>
<thead>
<tr>
<th>Faculty Taught RM</th>
<th>SAS Accredited</th>
<th>Percent of Sample</th>
<th>Not SAS Accredited</th>
<th>Percent of Sample</th>
<th>Cat Total</th>
<th>Cat Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>18</td>
<td>64%</td>
<td>10</td>
<td>36%</td>
<td>28</td>
<td>80%</td>
</tr>
<tr>
<td>No</td>
<td>4</td>
<td>57%</td>
<td>3</td>
<td>43%</td>
<td>7</td>
<td>20%</td>
</tr>
</tbody>
</table>

Final Status * Tng Research Methods Cross tabulation

<table>
<thead>
<tr>
<th>FinalStatus</th>
<th>TrngResearchMethods</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Count</td>
<td>3_a</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>2.6</td>
</tr>
<tr>
<td>1</td>
<td>Count</td>
<td>4_a</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>4.4</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>7.0</td>
</tr>
</tbody>
</table>

Each subscript letter denotes a subset of TngResearchMethods categories whose column proportions do not differ significantly from each other at the .05 level.

Chi-Square Tests

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>.122^a</td>
<td>1</td>
<td>.726</td>
<td></td>
<td>.525</td>
</tr>
<tr>
<td>Continuity Correction^b</td>
<td>.000</td>
<td>1</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>.121</td>
<td>1</td>
<td>.728</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fisher's Exact Test</td>
<td></td>
<td></td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>.119</td>
<td>1</td>
<td>.730</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 2.60.
b. Computed only for a 2x2 table
GME Program Faculty Trained to Teach Writing Skills: Figure 35, RQ3

<table>
<thead>
<tr>
<th>Faculty Taught TBS</th>
<th>SAS Accredited</th>
<th>SAS Accredited Percent of Sample</th>
<th>Not SAS Accredited</th>
<th>Not Yet SAS Accredited Percent of Sample</th>
<th>Cat Total</th>
<th>Cat Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>9</td>
<td>60%</td>
<td>6</td>
<td>40%</td>
<td>15</td>
<td>43%</td>
</tr>
<tr>
<td>No</td>
<td>13</td>
<td>65%</td>
<td>7</td>
<td>35%</td>
<td>20</td>
<td>57%</td>
</tr>
</tbody>
</table>

**Final Status * Trng ScWrSkills Cross tabulation**

<table>
<thead>
<tr>
<th>FinalStatus</th>
<th>TrngScWrSkills</th>
<th>Count</th>
<th>Expected Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>7_a</td>
<td>7.4</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>6_a</td>
<td>5.6</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>13_a</td>
<td>12.6</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>9_a</td>
<td>9.4</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>20</td>
<td>20.0</td>
</tr>
</tbody>
</table>

Each subscript letter denotes a subset of TrngScWrSkills categories whose column proportions do not differ significantly from each other at the .05 level.

**Chi-Square Tests**

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>.092^a</td>
<td>1</td>
<td>.762</td>
<td></td>
<td>.518</td>
</tr>
<tr>
<td>Continuity Correction^b</td>
<td>.000</td>
<td>1</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>.092</td>
<td>1</td>
<td>.762</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fisher's Exact Test</td>
<td></td>
<td></td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>.089</td>
<td>1</td>
<td>.765</td>
<td></td>
<td>.518</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td></td>
<td></td>
<td>35</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.57.
b. Computed only for a 2x2 table
## GME Program Faculty Trained to Teach Team Building Skills: Figure 36, RQ3

<table>
<thead>
<tr>
<th>Faculty</th>
<th>SAS Accredited</th>
<th>SAS Accredited Percent of Sample</th>
<th>Not SAS Accredited</th>
<th>Not Yet SAS Accredited Percent of Sample</th>
<th>Cat Total</th>
<th>Cat Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>14</td>
<td>67%</td>
<td>7</td>
<td>33%</td>
<td>21</td>
<td>60%</td>
</tr>
<tr>
<td>No</td>
<td>8</td>
<td>57%</td>
<td>6</td>
<td>43%</td>
<td>14</td>
<td>40%</td>
</tr>
</tbody>
</table>

### Final Status * Trng Team Bldg Skills Cross tabulation

<table>
<thead>
<tr>
<th>FinalStatus</th>
<th>TrngTeamBldgSkills</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>0</td>
<td>Count</td>
<td>6a</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>5.2</td>
</tr>
<tr>
<td>1</td>
<td>Count</td>
<td>8a</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>8.8</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>14.0</td>
</tr>
</tbody>
</table>

Each subscript letter denotes a subset of TrngTeamBldgSkills categories whose column proportions do not differ significantly from each other at the .05 level.

### Chi-Square Tests

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>.326a</td>
<td>1</td>
<td>.568</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuity Correction</td>
<td>.046</td>
<td>1</td>
<td>.830</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>.325</td>
<td>1</td>
<td>.569</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fisher's Exact Test</td>
<td>.317</td>
<td>1</td>
<td>.573</td>
<td>.724</td>
<td>.413</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td></td>
<td>35</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.20.
b. Computed only for a 2x2 table

![Bar Chart](image)
Research Question 4: How do osteopathic GME program directors expressed expectations for achievement of the four ACGME published “goals and benefits” for the new Single Accreditation System (SAS) relate to actual achievement of “initial program accreditation” under the Single Accreditation System?

H₀ = There is no significant difference between GME programs likelihood of achievement of “initial program accreditation” under the Single Accreditation System based upon the program director’s expressed expectation for achievement of the ACGME published “goals and benefits”.

H₁ = There is a significant difference between GME programs likelihood of achievement of “initial program accreditation” under the Single Accreditation System based upon the program director’s expressed expectation for achievement of the ACGME published “goals and benefits”.

Contributing Results Elements RQ4

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>37</td>
<td>ACGME Stated benefits of SAS (Seamless Eligibility/Access)</td>
</tr>
<tr>
<td>38</td>
<td>ACGME Stated benefits of SAS (Consistent Training/Evaluation)</td>
</tr>
<tr>
<td>39</td>
<td>ACGME Stated benefits of SAS (Elimination of Duplication)</td>
</tr>
<tr>
<td>40</td>
<td>ACGME Stated benefits of SAS (Cost Savings)</td>
</tr>
</tbody>
</table>
ACGME Stated goals and benefits of SAS (Seamless Eligibility): Figure 37, RQ4

<table>
<thead>
<tr>
<th>Seamless Eligibility</th>
<th>SAS Accredited</th>
<th>Not SAS Accredited</th>
<th>Cat Total</th>
<th>Cat Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>18</td>
<td>6</td>
<td>24</td>
<td>69%</td>
</tr>
<tr>
<td>No</td>
<td>4</td>
<td>7</td>
<td>11</td>
<td>31%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>finalstatus</th>
<th>benefitSeamlessEligibility</th>
<th>count</th>
<th>Expected Count</th>
<th>count</th>
<th>Expected Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>7a</td>
<td>4.1</td>
<td>6b</td>
<td>8.9</td>
</tr>
<tr>
<td>1</td>
<td>4a</td>
<td>18b</td>
<td>6.9</td>
<td>15.1</td>
<td>22.0</td>
</tr>
<tr>
<td>Total</td>
<td>11</td>
<td>24</td>
<td>11.0</td>
<td>24.0</td>
<td>35.0</td>
</tr>
</tbody>
</table>

Each subscript letter denotes a subset of BenefitSeamlessEligibility categories whose column proportions do not differ significantly from each other at the .05 level.

Chi-Square Tests

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>4.823a</td>
<td>1</td>
<td>.028</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuity Correction</td>
<td>3.310</td>
<td>1</td>
<td>.069</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>4.767</td>
<td>1</td>
<td>.029</td>
<td>.057</td>
<td>.035</td>
</tr>
<tr>
<td>Fisher's Exact Test</td>
<td>4.685</td>
<td>1</td>
<td>.030</td>
<td>.057</td>
<td>.035</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 4.09.
b. Computed only for a 2x2 table
ACGME Stated benefits of SAS (Consistent Training/Evaluation): Figure 38, RQ4

<table>
<thead>
<tr>
<th>Cost Savings</th>
<th>SAS Accredited</th>
<th>Not SAS Accredited</th>
<th>Cat Total</th>
<th>Cat Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>22 total</td>
<td>13 total</td>
<td>35</td>
<td>49%</td>
</tr>
<tr>
<td>Yes</td>
<td>13</td>
<td>4</td>
<td>17</td>
<td>49%</td>
</tr>
<tr>
<td>No</td>
<td>9</td>
<td>9</td>
<td>18</td>
<td>51%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Final Status</th>
<th>Benefit Consistent Evaluation Cross tabulation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Benefit Consistent Evaluation</td>
</tr>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Final Status</td>
<td>0 Count</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
</tr>
<tr>
<td></td>
<td>1 Count</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
</tr>
</tbody>
</table>

Each subscript letter denotes a subset of Benefit Consistent Evaluation categories whose column proportions do not differ significantly from each other at the .05 level.

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>2.624</td>
<td>1</td>
<td>.105</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuity Correction</td>
<td>1.613</td>
<td>1</td>
<td>.204</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>2.676</td>
<td>1</td>
<td>.102</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fisher's Exact Test</td>
<td>2.549</td>
<td>1</td>
<td>.164</td>
<td>.102</td>
<td></td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.31.
b. Computed only for a 2x2 table
ACGME Stated goals and benefits of SAS (Eliminates Duplication): Figure 39, RQ4

<table>
<thead>
<tr>
<th>Duplication Eliminated</th>
<th>SAS Accredited 22 total</th>
<th>SAS Accredited Percent of Sample</th>
<th>Not SAS Accredited 13 total</th>
<th>Not Yet SAS Accredited Percent of Sample</th>
<th>Cat Total 35</th>
<th>Cat Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>10</td>
<td>83%</td>
<td>2</td>
<td>17%</td>
<td>12</td>
<td>34%</td>
</tr>
<tr>
<td>No</td>
<td>12</td>
<td>52%</td>
<td>11</td>
<td>48%</td>
<td>23</td>
<td>66%</td>
</tr>
</tbody>
</table>

Final Status * Benefit Eliminates Duplicate Accr Cross tabulation

<table>
<thead>
<tr>
<th>FinalStatus</th>
<th>BenefitEliminatesDuplicateAccr</th>
<th>0</th>
<th>1</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Count</td>
<td>11ₐ</td>
<td>2ₐ</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>8.5</td>
<td>4.5</td>
<td>13.0</td>
</tr>
<tr>
<td>1</td>
<td>Count</td>
<td>12ₐ</td>
<td>10ₐ</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>14.5</td>
<td>7.5</td>
<td>22.0</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>23</td>
<td>12</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>23.0</td>
<td>12.0</td>
<td>35.0</td>
</tr>
</tbody>
</table>

Each subscript letter denotes a subset of BenefitEliminatesDuplicateAccr categories whose column proportions do not differ significantly from each other at the .05 level.

Chi-Square Tests

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>3.279ₐ</td>
<td>1</td>
<td>.070</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuity Correction</td>
<td>2.081</td>
<td>1</td>
<td>.149</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>3.525</td>
<td>1</td>
<td>.060</td>
<td></td>
<td>.139</td>
</tr>
<tr>
<td>Fisher's Exact Test</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.072</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>3.186</td>
<td>1</td>
<td>.074</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 4.46.
b. Computed only for a 2x2 table.
ACGME Stated goals and benefits of SAS (Cost Savings):  Figure 40, RQ4

<table>
<thead>
<tr>
<th>Cost</th>
<th>SAS Accredited</th>
<th>Not Yet SAS Accredited</th>
<th>Cat Total</th>
<th>Cat Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent of Sample</td>
<td>Percent of Sample</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>3</td>
<td>60%</td>
<td>2</td>
<td>40%</td>
</tr>
<tr>
<td>No</td>
<td>19</td>
<td>63%</td>
<td>11</td>
<td>37%</td>
</tr>
</tbody>
</table>

### Final Status * Benefit Efficiency Cost Savings Cross tabulation

<table>
<thead>
<tr>
<th>Final Status</th>
<th>Benefit</th>
<th>Efficiency</th>
<th>Cost Savings</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final Status</td>
<td>Count</td>
<td>Expected Count</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>11</td>
<td>2</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>19</td>
<td>3</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>30</td>
<td>5</td>
<td>35</td>
<td></td>
</tr>
</tbody>
</table>

Each subscript letter denotes a subset of BenefitEfficiencyCostSavings categories whose column proportions do not differ significantly from each other at the .05 level.

### Chi-Square Tests

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>.020a</td>
<td>1</td>
<td>.886</td>
<td>1.000</td>
<td>.626</td>
</tr>
<tr>
<td>Continuity Correctionb</td>
<td>.000</td>
<td>1</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>.020</td>
<td>1</td>
<td>.887</td>
<td>1.000</td>
<td>.626</td>
</tr>
<tr>
<td>Fisher's Exact Test</td>
<td></td>
<td></td>
<td></td>
<td>1.000</td>
<td>.626</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>.020</td>
<td>1</td>
<td>.888</td>
<td>1.000</td>
<td>.626</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 1.86.

b. Computed only for a 2x2 table

---

![Bar Chart](image_url)
Research Question 5: How does conducting financial due diligence related to the potential fiscal impacts of the new Single Accreditation System on osteopathic GME programs impact achievement of “initial program accreditation” under SAS?

\( H_0 \) = Conducting financial due diligence related to the potential fiscal impacts of the new Single Accreditation System on osteopathic GME programs has no significant impact on achievement of “initial program accreditation” under the Single Accreditation System.

\( H_1 \) = Conducting financial due diligence related to the potential fiscal impacts of the new Single Accreditation System on osteopathic GME programs has significant impact on achievement of “initial program accreditation” under the Single Accreditation System.

Contributing Results Elements RQ5

Figure: Independent variable cross-tabulated against dependent variable

41 ................................................................. Cost Analysis of Potential SAS Impact

42 .................................................. Affordability of GME Program without CMS funding

43 .............................................................. Anticipated Impact of SAS on Program Size
**GME Program Cost Analysis of Potential SAS Impact:** Figure 41, RQ5

<table>
<thead>
<tr>
<th>Cost Analysis Reported</th>
<th>SAS Accredited</th>
<th>Not SAS Accredited</th>
<th>Not Yet SAS Accredited</th>
<th>Cat Total</th>
<th>Cat Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent of Sample</td>
<td>Percent of Sample</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Completed</td>
<td>8</td>
<td>7</td>
<td>15</td>
<td>22 total</td>
<td>43%</td>
</tr>
<tr>
<td>In Process</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1 total</td>
<td>6%</td>
</tr>
<tr>
<td>None</td>
<td>4</td>
<td>2</td>
<td>6</td>
<td>13 total</td>
<td>17%</td>
</tr>
<tr>
<td>No Plans</td>
<td>9</td>
<td>3</td>
<td>12</td>
<td>35</td>
<td>34%</td>
</tr>
<tr>
<td>Use Consultants</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cost Analysis Phase Cross tabulation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>FinalStatus 0</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>FinalStatus 1</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Each subscript letter denotes a subset of CostAnalysisPhase categories whose column proportions do not differ significantly from each other at the .05 level.

**Chi-Square Tests**

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>1.520</td>
<td>3</td>
<td>.678</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>1.545</td>
<td>3</td>
<td>.672</td>
</tr>
</tbody>
</table>

N of Valid Cases 35

a. 5 cells (62.5%) have expected count less than 5. The minimum expected count is .74.
Affordability of GME Program without CMS funding: Figure 42, RQ5

<table>
<thead>
<tr>
<th>Final Status</th>
<th>Definite No</th>
<th>Definite Yes</th>
<th>Not Sure</th>
<th>Prob No</th>
<th>Prob Yes</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>9a</td>
<td>1a</td>
<td>1a</td>
<td>2a</td>
<td>0a</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>5.9</td>
<td>1.1</td>
<td>.7</td>
<td>4.8</td>
<td>.4</td>
</tr>
<tr>
<td>1</td>
<td>7a</td>
<td>2a</td>
<td>1a</td>
<td>11a</td>
<td>1a</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>10.1</td>
<td>1.9</td>
<td>1.3</td>
<td>8.2</td>
<td>.6</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>16</td>
<td>3</td>
<td>2</td>
<td>13</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>16.0</td>
<td>3.0</td>
<td>2.0</td>
<td>13.0</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Each subscript letter denotes a subset of Affordability categories whose column proportions do not differ significantly from each other at the .05 level.

Chi-Square Tests

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>5.889a</td>
<td>4</td>
<td>.208</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>6.496</td>
<td>4</td>
<td>.165</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>35</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 7 cells (70.0%) have expected count less than 5. The minimum expected count is .37.
Anticipated Impact of SAS on Program Size: Figure 43, RQ5

<table>
<thead>
<tr>
<th>SAS Effect on Size</th>
<th>SAS Accredited</th>
<th>Not Yet SAS Accredited</th>
<th>Cat Total</th>
<th>Cat Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent of Sample</td>
<td>Percent of Sample</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expand</td>
<td>60%</td>
<td>40%</td>
<td>10</td>
<td>29%</td>
</tr>
<tr>
<td>Same</td>
<td>69%</td>
<td>32%</td>
<td>19</td>
<td>54%</td>
</tr>
<tr>
<td>Reduce</td>
<td>60%</td>
<td>40%</td>
<td>5</td>
<td>14%</td>
</tr>
<tr>
<td>Uncertain</td>
<td>0%</td>
<td>100%</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td>Close PGM</td>
<td>0%</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

Final Status * Anticipated Effect SAS Cross tabulation

<table>
<thead>
<tr>
<th>Final Status</th>
<th>Anticipated Effect SAS</th>
<th>Expand</th>
<th>Maintain</th>
<th>Reduce</th>
<th>Uncertain</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Count</td>
<td>4_a</td>
<td>6_a</td>
<td>2_a</td>
<td>1_a</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>3.7</td>
<td>7.1</td>
<td>1.9</td>
<td>.4</td>
<td>13.0</td>
</tr>
<tr>
<td>1</td>
<td>Count</td>
<td>6_a</td>
<td>13_a</td>
<td>3_a</td>
<td>0_a</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>6.3</td>
<td>11.9</td>
<td>3.1</td>
<td>.6</td>
<td>22.0</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>10</td>
<td>19</td>
<td>5</td>
<td>1</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>10.0</td>
<td>19.0</td>
<td>5.0</td>
<td>1.0</td>
<td>35.0</td>
</tr>
</tbody>
</table>

Each subscript letter denotes a subset of Anticipated Effect SAS categories whose column proportions do not differ significantly from each other at the .05 level.

Chi-Square Tests

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymptotic Significance (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>1.997a</td>
<td>3</td>
<td>.573</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>2.291</td>
<td>3</td>
<td>.514</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>35</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 5 cells (62.5%) have expected count less than 5. The minimum expected count is .37.
Chapter Five

Discussion

Big Picture Summary

The new GME Single Accreditation System (SAS) under ACGME control is a reality as the AOA opted out of the GME accreditation business with final effective date of June 30, 2020. It is important to note that the AOA is still responsible for the accreditation of all AOA GME programs that have not yet achieved GME initial accreditation with ACGME and formally opted out of AOA program oversight. CMS does not fund GME programs without current accreditation. Osteopathic GME programs and their sponsor organizations are migrating to a new set of ACGME standards seeking initial accreditation.

This research seeks to obtain some diagnostic information about “how things are going” with respect to the mid-stage transition of osteopathic residency programs into the Single Accreditation System directly from those individuals closest to the issue and the process, osteopathic GME program directors.

Results of this mid-process inquiry do not indicate that there are significant statistical differences between or among the characteristics of GME programs measured in the study that successfully made an early pivot to the new SAS and those that have not to do so. While social science research seeks to identify and measure predictive influences that can serve as a basis for model construction, not all transitional processes involving different groups may display statistically significant process or substance differences. But the goal of social science
research is not to “force” statistical significance in findings - but to deploy standard design and analytics to better understand and inform. Results of this study may be interpreted as “good news” by those programs that have not yet made it through the GME pivot process. A purpose of this study was to understand and inform GME stakeholders on possible program characteristics that may increase their chances of being accredited under SAS in the midst of their efforts to achieve accreditation under the new guidelines. While the intent underlying the research is straightforward, the reality is complex. Dr. Grandon Gill of University of South Florida’s Muma College of Business describes complexity in terms of “rugged landscapes” consisting of peaks and valleys, from which we can only hope to locate “fitness peaks” and then wait for them to change. This can be envisioned heuristically as a person ship wrecked in the Arctic Ocean and stranded on a melting iceberg. The iceberg appears large and stable enough when jumped upon, but over time it begins to melt in response to environmental influences. The person must quickly find another iceberg upon which to jump or be prepared to survive a swim in frigid, unknown waters. Osteopathic GME programs are moving from a previous AOA GME “fitness peak” to another with ACGME. Such change brings uncertainty over both what is known and unknown, such as, wondering if the new iceberg will remain solid, for how long or is another floating on the horizon if needed. Osteopathic GME programs have a track record of producing quality physicians focused on caring for the whole person. D.O.’s have a “Mind, Body & Spirit” approach to healing, leveraging a person’s natural ability to heal. Their training includes unique elements including osteopathic manipulative medicine (OMM) which is a non-invasive, hands-on technique used to diagnose, treat and implement as prevention therapy. Provisions to protect these core osteopathic principles and healing tools have been made for GME programs wishing to add or
maintain the additional osteopathic designation under the new SAS. Osteopathic and allopathic physicians through their GME programs have a chance to embrace how they are unique, and more importantly, alike. They can learn from each other. They will train in the same facilities and care for the same patients just like they will do once they have completed their training. Over half of osteopathic medical student graduates of recent years attend ACGME residency programs. Whether D.O. or M.D., individuals have to be smart, competent, skilled and caring to be a physician today. Both clinical degrees are issued the same license to practice medicine by the states where they serve. It is only acting in a spirit of cooperation, embracing diversity and engaging in genuine collaboration that U.S. GME programs can hope to prepare the significant number of quality physicians needed to deliver healthcare to all Americans.

The stated mission of ACGME is:

“To improve health care by assessing and advancing the quality of resident physicians' education through accreditation.”

SAS moves U.S. GME to a single accrediting body (ACGME), which is being entrusted as gatekeepers for the equitable access, deployment and distribution of more than nine billion dollars ($9,000,000,000.00) of GME training funds annually. Americans who have made a payment via payroll taxes into the U.S. Medicare System are the financiers of U.S. GME system and should be kept informed as principal stakeholders.

What Was Learned?

While the study results did not yield statistically significant associations or correlations, certain
fitness peaks were identified that may be of value to programs still in the process of pivoting to obtain accreditation. **In short, those osteopathic GME programs represented in the study that successfully made the early pivot to SAS do not appear to be substantively different from those who have not to do so.** This fact is not surprising, since quality osteopathic GME training has remained a rigorous and demanding reality. State boards must be passed and competencies achieved in order to practice medicine in America. Given the nationally identified need for primary care physicians, it is valuable to learn that all seven (7) of the primary care programs that participated in this study successfully made the transition to SAS. This result is significant both practically and statistically. Family practice physicians are already in short supply across the United States, so it is critical that those osteopathic GME programs remain successful. Rural locations represented in this study also showed the ability to meet the ACGME requirements with more than 50% reporting SAS accreditation.

Osteopathic GME programs represented in the study appear to have the major operational and leadership elements to achieve SAS accreditation. Whether or not they can afford, financially, in the longer term, to make the pivot is a different and larger question. Only about half of the programs had conducted any financial due diligence associated with the SAS transition. This research was not able to identify any economic modeling or calculations made available to osteopathic programs and their institutional sponsors as to changes in GME program operational costs that might be expected. Some common GME program characteristics were derived of those which successfully made the pivot and did so before the half-way mark to the June 30, 2020 deadline. A simple model is presented to quickly share research information results.
Study Group Summary of Practical Characteristics:

Simple charts have been created to provide a quick visual representation of survey results related to the 66% of study respondents who achieved SAS accreditation. They are divided into groups associated with the study research questions. The underlying goal of this research was to inform. The practical charts represented provide certain common characteristics of those GME programs that have successfully achieved early SAS accreditation as well as highlight counter indications as well.
Those survey respondent characteristics that represented greater than 50% of the category and greater than 50% SAS achievement are highlighted in green. Simply stated, most directors selected that response and most of those who selected that response achieved SAS.

Those survey respondent characteristic that represented less than 50% of the category and less than 50% SAS achievement are highlighted in purple. Simply stated, most directors did not select that response and most of those who selected that response did not achieve SAS.

Those who did not meet the above parameters appear without highlight.

This tool gives a basic litmus test of characteristics most common amongst surveyed programs and most associated with SAS achievement in the sample group. The SAS Indicator Charts representations are not supported by statistical significance or even claim of practical importance or requirements for SAS achievement. A few items identified are actually counterintuitive and the relationship to SAS accreditation is spurious in nature.

**GME Program SAS Indicator Tables:**

The first column is the survey category associated with a specific research question. The second column is the percent of total survey population for that category and the third column is the percent of those in that category who achieved SAS accreditation.
Research Question 1

What general shared characteristics are associated with current osteopathic GME programs those have already achieved “initial program accreditation” under the new Single Accreditation System?

Table E: GME Program SAS Indicators RQ1

<table>
<thead>
<tr>
<th>Category</th>
<th>Percent of All Respondents</th>
<th>Percent SAS Accredited</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specialist GME programs</td>
<td>77%</td>
<td>52%</td>
</tr>
<tr>
<td>Primary Care programs</td>
<td>20%</td>
<td>100%</td>
</tr>
<tr>
<td>Fellowship program</td>
<td>3%</td>
<td>100%</td>
</tr>
<tr>
<td>Urban setting</td>
<td>83%</td>
<td>62%</td>
</tr>
<tr>
<td>Rural setting</td>
<td>17%</td>
<td>67%</td>
</tr>
<tr>
<td>Research facility affiliation</td>
<td>80%</td>
<td>57%</td>
</tr>
<tr>
<td>No Research facility affiliation</td>
<td>20%</td>
<td>86%</td>
</tr>
<tr>
<td>Not for profit sponsors</td>
<td>89%</td>
<td>68%</td>
</tr>
<tr>
<td>For profit sponsors</td>
<td>11%</td>
<td>25%</td>
</tr>
<tr>
<td>Multi-facility health system</td>
<td>51%</td>
<td>61%</td>
</tr>
<tr>
<td>Single acute care hospital</td>
<td>17%</td>
<td>67%</td>
</tr>
<tr>
<td>Community based hospital multi-sites</td>
<td>23%</td>
<td>75%</td>
</tr>
<tr>
<td>Dually accredited programs</td>
<td>66%</td>
<td>78%</td>
</tr>
<tr>
<td>Non-dually accredited programs</td>
<td>34%</td>
<td>33%</td>
</tr>
<tr>
<td>Receive CMS funding</td>
<td>89%</td>
<td>61%</td>
</tr>
<tr>
<td>No CMS funding</td>
<td>6%</td>
<td>50%</td>
</tr>
<tr>
<td>Unsure about CMS funding</td>
<td>6%</td>
<td>100%</td>
</tr>
<tr>
<td>Residents limited to 80hrs/week</td>
<td>86%</td>
<td>67%</td>
</tr>
<tr>
<td>Residents exceed 80hrs/week</td>
<td>14%</td>
<td>40%</td>
</tr>
<tr>
<td>Directors DOs</td>
<td>71%</td>
<td>60%</td>
</tr>
<tr>
<td>Directors MDs</td>
<td>29%</td>
<td>70%</td>
</tr>
</tbody>
</table>

** >50% of the total category and > 50% SAS achievement are highlighted in green
* <50% of the total category and < 50% SAS achievement are highlighted in purple
Table F: Summary of Practical Indicators for SAS Accreditation Achievement RQ1

**Positive Indication Group**: (>50% of the total category and > 50% SAS achievement)

- Specialty GME Programs
- D.O. GME Program Directors
- Urban Settings
- Not for Profit Sponsors
- Multi-Facility Health Systems
- Already Dually Accredited (AOA and ACGME)
- Receive CMS Funding
- Residents do not Exceed 80 Duty Hours per Week

**Negative Indication Group**: (<50% of the total category and < 50% SAS achievement)

- For Profit Sponsors
- Not Currently Dually Accredited (AOA and ACGME)
- Residents Exceed 80 Duty Hours per Week
Research Question 2

Which curriculum elements are most prevalent in osteopathic GME programs that have already achieved “initial program accreditation” under the Single Accreditation System?

Table G: GME Program SAS Indicators RQ2

<table>
<thead>
<tr>
<th>Curriculum Element</th>
<th>Percent of All Respondents</th>
<th>Percent SAS Accredited</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Simulation lab access</strong></td>
<td>89%</td>
<td>65%</td>
</tr>
<tr>
<td>No sim lab access</td>
<td>11%</td>
<td>50%</td>
</tr>
<tr>
<td>No Research facility access</td>
<td>23%</td>
<td>75%</td>
</tr>
<tr>
<td><strong>Research faculty access</strong></td>
<td>77%</td>
<td>59%</td>
</tr>
<tr>
<td><strong>Access to other GME programs</strong></td>
<td>77%</td>
<td>59%</td>
</tr>
<tr>
<td>No access to other GME programs</td>
<td>23%</td>
<td>75%</td>
</tr>
<tr>
<td><strong>QIPS taught</strong></td>
<td>89%</td>
<td>61%</td>
</tr>
<tr>
<td>QIPS not taught</td>
<td>11%</td>
<td>75%</td>
</tr>
<tr>
<td><strong>Team based Quality Improve projects</strong></td>
<td>74%</td>
<td>62%</td>
</tr>
<tr>
<td>No team based QI projects</td>
<td>26%</td>
<td>67%</td>
</tr>
<tr>
<td><strong>Real-world patient safety taught</strong></td>
<td>80%</td>
<td>61%</td>
</tr>
<tr>
<td>No real-world patient safety taught</td>
<td>20%</td>
<td>71%</td>
</tr>
<tr>
<td><strong>CLER taught</strong></td>
<td>60%</td>
<td>67%</td>
</tr>
<tr>
<td>No CLER taught</td>
<td>40%</td>
<td>57%</td>
</tr>
<tr>
<td><strong>No JT Commission National safety trng</strong></td>
<td>57%</td>
<td>70%</td>
</tr>
<tr>
<td>Joint Commission National safety training</td>
<td>43%</td>
<td>53%</td>
</tr>
<tr>
<td><strong>No local health facilities QI initiatives</strong></td>
<td>60%</td>
<td>67%</td>
</tr>
<tr>
<td>Local health facilities QI initiatives</td>
<td>40%</td>
<td>57%</td>
</tr>
</tbody>
</table>

** >50% of the total category and > 50% SAS achievement are highlighted in green
* <50% of the total category and < 50% SAS achievement are highlighted in purple
Table H: Summary of Practical Indicators for SAS Accreditation Achievement RQ2

**Positive Indication Group:** (>50% of the total category and > 50% SAS achievement)
- Residents have Simulation Lab Access
- Research Faculty Access
- Residents have Access to other GME Programs
- Residents taught QIPs
- Residents participate in Team-base Quality Improvement Projects
- Residents taught Real-World Patient Safety
- Residents taught CLER
- No Local Health Facility Quality Improvement Projects
- No Joint Commission National Safety Training

**Negative Indication Group:** (<50% of the total category and < 50% SAS achievement)
- None

**H₀ =** There *are no significant differences* between the prevalence of curriculum elements of those Osteopathic Graduate Medical Education (GME) residency programs which have already successfully made the “pivot” from AOA accreditation to the new Single Accreditation System (SAS) accreditation under ACGME standards and those programs which have not yet achieved SAS accreditation.
\( \textbf{H}_1 = \text{There are significant differences} \) between the prevalence of curriculum elements of those Osteopathic Graduate Medical Education (GME) residency programs which have already successfully made the “pivot” from AOA accreditation to the new Single Accreditation System (SAS) accreditation under ACGME standards and those programs which have not yet achieved SAS accreditation.

Research question 2: **Fail to reject the null hypothesis**

**Reasoning:**

All statistical assumptions associated with using chi-square were not realized. A minimum of 5 units in each cell was a shortfall in most cases. The small sample size \( N=35 \) made this very difficult even for a 2 x 2 cross tabulation. The assumptions of random sample and minimum of 30 were consistently met. Therefore, statistical significance was not demonstrated. The cross tabulation gives a visualization of observed verses expected values and the close relation between.
Research Question 3

How do osteopathic GME program directors and assigned faculty characteristics impact the attainment of “initial program accreditation” under the Single Accreditation System?

Table I: GME Program SAS Indicators RQ3

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Percent of All Respondents</th>
<th>Percent SAS Accredited</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Faculty not ABMS certified</strong></td>
<td>69%</td>
<td>58%</td>
</tr>
<tr>
<td>Faculty ABMS certified</td>
<td>31%</td>
<td>73%</td>
</tr>
<tr>
<td><strong>No Access to sub-specialty faculty</strong></td>
<td>91%</td>
<td>63%</td>
</tr>
<tr>
<td>Access to sub-specialty faculty</td>
<td>9%</td>
<td>67%</td>
</tr>
<tr>
<td><strong>No competitive research funding</strong></td>
<td>97%</td>
<td>62%</td>
</tr>
<tr>
<td>Competitive research funding</td>
<td>3%</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Faculty specialty certified</strong></td>
<td>86%</td>
<td>57%</td>
</tr>
<tr>
<td>Faculty not specialty certified</td>
<td>14%</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Director scholarly production</strong></td>
<td>77%</td>
<td>67%</td>
</tr>
<tr>
<td>Director no scholarly production</td>
<td>23%</td>
<td>50%</td>
</tr>
<tr>
<td><strong>Faculty trng evidence based medicine</strong></td>
<td>77%</td>
<td>70%</td>
</tr>
<tr>
<td><em>Faculty no trng evidence based medicine</em>*</td>
<td>23%</td>
<td>38%</td>
</tr>
<tr>
<td><strong>Faculty training team building skills</strong></td>
<td>60%</td>
<td>67%</td>
</tr>
<tr>
<td>Faculty no training team building skills</td>
<td>40%</td>
<td>57%</td>
</tr>
<tr>
<td><strong>Faculty training research methods</strong></td>
<td>80%</td>
<td>64%</td>
</tr>
<tr>
<td>Faculty no training research methods</td>
<td>20%</td>
<td>57%</td>
</tr>
<tr>
<td><strong>Program director responsible faculty</strong></td>
<td>83%</td>
<td>62%</td>
</tr>
</tbody>
</table>

** >50% of the total category and > 50% SAS achievement are highlighted in green
* <50% of the total category and < 50% SAS achievement are highlighted in purple
Table J: Summary of Practical Indicators for SAS Accreditation Achievement RQ3

**Positive Indication Group:** (>50% of the total category and > 50% SAS achievement)

- Faculty not ABMS certified
- No Access to sub-specialty faculty
- No competitive research funding
- Faculty specialty certified
- Director scholarly production
- Faculty training evidence based medicine
- Faculty training team building skills
- Faculty training research methods
- Program designated director responsible faculty with Paid, Protected Time

**Negative Indication Group:** (<50% of the total category and < 50% SAS achievement)

- Faculty not trained in evidence based medicine

**Hypothesis Testing RQ 3**

H$_0$ = There are no significant differences between program director and faculty characteristics of those Osteopathic Graduate Medical Education (GME) residency programs who have already successfully made the “pivot” from AOA accreditation to the new Single Accreditation System (SAS) accreditation under ACGME standards and those programs who have not yet achieve SAS accreditation.
\( \text{H}_1 = \text{There are significant differences} \) between program director and characteristics of those Osteopathic Graduate Medical Education (GME) residency programs who have already successfully made the “pivot” from AOA accreditation to the new Single Accreditation System (SAS) accreditation under ACGME standards and those programs who have not yet achieve SAS accreditation.

Research question 3: **Fail to reject the null hypothesis**

**Reasoning:**

All statistical assumptions associated with using chi-square were not realized. A minimum of 5 units in each cell was a shortfall in most cases. The small sample size \( N=35 \) made this very difficult even for a 2 x 2 cross tabulation. The assumptions of random sample and minimum of 30 were consistently met. Therefore, statistical significance was not demonstrated. The cross tabulation gives a visualization of observed verses expected values and the close relation between.
Research Question 4

How does osteopathic GME program directors expressed expectations for achievement of the four ACGME published “goals and benefits” for the new Single Accreditation System (SAS) relate to actual achievement of “initial program accreditation” under the Single Accreditation System?

Table K: GME Program SAS Indicators RQ4

<table>
<thead>
<tr>
<th></th>
<th>Percent of All Respondents</th>
<th>Percent SAS Accredited</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elimination of duplication</td>
<td>34%</td>
<td>83%</td>
</tr>
<tr>
<td><strong>No elimination of duplication</strong></td>
<td>66%</td>
<td>52%</td>
</tr>
<tr>
<td>Cost savings</td>
<td>14%</td>
<td>60%</td>
</tr>
<tr>
<td><strong>No cost savings</strong></td>
<td>86%</td>
<td>63%</td>
</tr>
<tr>
<td>Consistent evaluation and training</td>
<td>49%</td>
<td>76%</td>
</tr>
<tr>
<td><strong>No consistent evaluation and training</strong></td>
<td>51%</td>
<td>50%</td>
</tr>
<tr>
<td><strong>Provides seamless eligibility</strong></td>
<td>69%</td>
<td>75%</td>
</tr>
<tr>
<td><em>Does not provide seamless eligibility</em></td>
<td>31%</td>
<td>36%</td>
</tr>
</tbody>
</table>

** >50% of the total category and > 50% SAS achievement are highlighted in green
* <50% of the total category and < 50% SAS achievement are highlighted in purple
Table L: Summary of Practical Indicators for SAS Accreditation Achievement RQ4

**Positive Indication Group** (>50% of the total category and > 50% SAS achievement)

Program directors’ expressed expectations of no elimination of duplication created by SAS

Program directors’ expressed expectations of no cost savings created by SAS

Program directors’ expressed expectation of no consistent evaluation and training created by SAS

Program directors’ expressed expectation that SAS provides seamless eligibility

**Negative Indication Group** (<50% of the total category and < 50% SAS achievement)

Program directors expressed expectation that SAS does not provide seamless eligibility

**Hypothesis Testing RQ 4**

\( H_0 = \) There is *no significant difference* between GME programs likelihood of achievement of “initial program accreditation” under the Single Accreditation System based upon the program director’s expressed expectation for achievement of the ACGME published “goals and benefits”.

\( H_1 = \) There is a *significant difference* between GME programs likelihood of achievement of “initial program accreditation” under the Single Accreditation System based upon the program director’s expressed expectation for achievement of the ACGME published “goals and benefits”.

Creating a set of expected benefits prior to the implementation of any project provides stakeholders insights into the organization’s intent and vision related to the undertaking. The four published benefits of SAS that were published by ACGME. Only one of the four benefits (eligibility and access to all GME programs) was thought to be benefit of SAS thus far by the
majority of GME Program Directors who took part in this study. The other three stated SAS benefits of program cost savings, elimination of duplication for dual programs and consistent evaluation and accountability of competency of resident physicians were not yet recognized as benefits by respondents. Interestingly, it did not matter if the GME program had yet achieved SAS accreditation or not. GME is still in the early SAS pivot process, therefore the true realization of expected benefits published by ACGME may not be known for some time. ACGME providing Osteopathic GME Program Directors making the pivot to SAS details as to “how” cost savings and efficiencies can be achieved under SAS may help resolve these concerns. (See Appendix C)

Research question 4: **Fail to reject the null hypothesis**

**Reasoning:**

All statistical assumptions associated with using chi-square were not realized. A minimum of 5 units in each cell was a shortfall in most cases. The small sample size N=35 made this very difficult even for a 2 x 2 cross tabulation. The assumptions of random sample and minimum of 30 were consistently met. Therefore, statistical significance was not demonstrated. The cross tabulation gives a visualization of observed verses expected values and the close relation between.
Research Question 5

How does conducting financial due diligence related to the potential fiscal impacts of the new Single Accreditation System on osteopathic GME programs impact achievement of “initial program accreditation” under SAS?

Table M: GME Program SAS Indicator RQ5

<table>
<thead>
<tr>
<th>Statement</th>
<th>Percent of All Respondents</th>
<th>Percent SAS Accredited</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some cost analysis on SAS impact conducted</td>
<td>49%</td>
<td>53%</td>
</tr>
<tr>
<td><strong>No cost analysis on SAS impact conducted</strong></td>
<td>51%</td>
<td>72%</td>
</tr>
<tr>
<td>Use of consultants for cost analysis</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Plan to maintain size or expand program</strong></td>
<td>83%</td>
<td>66%</td>
</tr>
<tr>
<td>Plan reduce size of program</td>
<td>14%</td>
<td>60%</td>
</tr>
<tr>
<td>Uncertain on effect on size of program</td>
<td>3%</td>
<td>0%</td>
</tr>
<tr>
<td>Will close program</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Require CMS funding to continue</strong></td>
<td>83%</td>
<td>62%</td>
</tr>
<tr>
<td>Don’t require CMS funding to continue</td>
<td>12%</td>
<td>75%</td>
</tr>
<tr>
<td>Unsure of impact of loss of CMS funding</td>
<td>6%</td>
<td>50%</td>
</tr>
</tbody>
</table>

** >50% of the total category and > 50% SAS achievement are highlighted in green
* <50% of the total category and < 50% SAS achievement are highlighted in purple
Table N: Summary of Practical Indicators for SAS Accreditation Achievement RQ5

**Positive Indication Group:** (>50% of the total category and > 50% SAS achievement)

- No cost analysis on SAS impact was conducted
- Plan to maintain size or expand GME program
- Require CMS funding to continue program

**Negative Indication Group:** (<50% of the total category and < 50% SAS achievement)

- None

**Hypothesis Testing RQ 5:**

\( H_0 = \) Conducting financial due diligence related to the potential fiscal impacts of the new Single Accreditation System on osteopathic GME programs has no significant impact on achievement of “initial program accreditation” under the Single Accreditation System.

\( H_1 = \) Conducting financial due diligence related to the potential fiscal impacts of the new Single Accreditation System on osteopathic GME programs has significant impact on achievement of “initial program accreditation” under the Single Accreditation System.

Research question 4: **Fail to reject the null hypothesis**

**Reasoning:**

All statistical assumptions associated with using chi-square were not realized. A minimum of 5 units in each cell was a shortfall in most cases. The small sample size \( N=35 \) made this very difficult even for a 2 x 2 cross tabulation. The assumptions of random sample and minimum of 30 were consistently met. Therefore, statistical significance was not demonstrated. The cross tabulation gives a visualization of observed verses expected values and the close relation between.
Conclusion

Over the next couple of years, ACGME program reviewers will complete hundreds of on-site visits of osteopathic GME programs to ascertain whether they are in “substantial compliance” with the new SAS standards. Like a new building owner meeting current tenants, a new set of rules will be applied and be transitioned over-time. The renewing of existing leases would be expected, as a building without tenants is empty. Almost all of the survey respondents verified their inability to operate their programs without CMS GME funding. GME accreditation under SAS is the only condition under which CMS funding can occur. America is in substantial need of well-trained, skilled physicians. This need will only increase with an aging population. This “need” must drive a genuine spirit of professional collegial cooperation during and after the SAS migration. A common purpose unites. It is not about taking shortcuts or sacrificing the quality of GME training. Nor about who has the best or most rules or occupies certain administrative roles. Currently, 129,000 Osteopathic physicians and medical students comprise a significant part of approximately one million physicians in the U.S. These physicians are no different than their allopathic brothers in the practice of medicine. All seek to heal. All have taken sacred oaths to do no harm. All are talented and caring members of our society. The common purpose requires embracing and accepting differences and harnessing the power of our diversity. Then physicians can focus their talents on the work of healing and caring.

The AOA accredited these very same quality osteopathic GME programs that are now working to make the pivot to SAS standards. It is important that both the AOA and ACGME assist all current qualified GME program training program and sites willing to transition to SAS. “Willing” is used because it will likely cost sponsoring institutions more to meet and maintain “substantial compliance” under the new SAS standards. Some may require additional paid
faculty and access to research facilities and training resources, all of which come at a price. It also takes time. By design, an organization’s mission statement should provide its focus and direction. The ACGME mission was shared in Chapter 2.

The AOA’s mission statement is

“to advance the philosophy and practice of osteopathic medicine by promoting excellence in education, research, and the delivery of quality, cost-effective healthcare”.

The inclusion of the word “research” shows vision, value and willingness to evolve to a new future. Ending the mission statement with a crescendo of “cost-effective healthcare” defines the unsolved mystery of our healthcare reality today which must be part of all future discussions.

What happens next? None of the survey respondents stated intentions to use outside consultants to assist with preparing for the SAS transition. Shortly after this survey study was distributed, the AOA announced the hiring of former ACGME reviewers to provide no fee expert consulting services to assist osteopathic programs make the pivot. This is a tangible step to facilitate the SAS migration and should be fully engaged by AOA programs in the GME pivot process.

**Recommendations for Future Research**

Due to the “newness” and on-going nature of the Single Accreditation System (SAS) implementation, a vast opportunity exists for future study. Hopefully, this study can be repeated annually in June 2018, June 2019 and June 2020 with a much larger sample size and with the addition of interviews to augment survey results. New data gathered may help focus efforts of GME programs still struggling to comply with SAS requirements. The impact of AOA consulting services also can be added to the study.
With healthcare in America quickly approaching 20% of the gross domestic product, studies in such areas as “actual costs” of GME training and “tangible benefits” measured by quality of patient care outcomes would have tremendous value. Although the United States spends the most money per capita on its healthcare, this investment does not directly translate into lowest morbidity and mortality rates in the world. Research into the discovery of specific cost saving elements that impact GME training programs mitigated by innovative partnering with community resources such as engaging highly qualified GME faculty mentors willing to volunteer their time and expertise can be done directly with GME sponsor organizations and program directors. An Institutional Theory (P. J. DiMaggio and W. Powell 1991) research study would be interesting to better understand possible isomorphic pressures that may have influenced the change from a two party to a single accreditation system for GME. Such discovery may help guide future direction and decisions. Additionally, research into GME Residency Match distribution trends before and after SAS is fully implemented could provide insights into outcome impacts of the change. Finally, there will be a need to determine how undergraduate Osteopathic schools will have to “pivot” within their own curricula to accommodate the enhanced residency requirements that will affect all of their graduates by 2020.
References


American Osteopathic Association, 142 E. Ontario St., Chicago, IL 60611-2864, www.osteopathic.org

Association of American Medical Colleges


Appendix A

SURVEY INSTRUMENT & CODING METHODOLOGY

GME PROGRAM DIRECTOR SURVEY: SINGLE ACCREDITATION SYSTEM

1- Copy

Survey Flow

(26 Questions)

Default Block

Research Survey Full Disclosure & Informed Consent

Questions: 26 multiple choice and single number responses
Time Requirement: One time, 10 minutes

Hello, My name is Tim Novak. I am doctoral student at the University of South Florida’s Muma College of Business. The purpose of my research is to ascertain the general readiness of U.S. Graduate Medical Education (GME) residency and fellowship programs to meet certain core requirements associated with the new Single Accreditation System (SAS) by the June 30, 2020 deadline. Please be assured of the confidentiality and anonymity of your responses. The data gathered will not be made available or sold to any third party and is strictly for the use of my DBA dissertation research. Only aggregate data will be reported. As a GME Program Director, you should find this survey relevant and informative. If you are interested in receiving an electronic copy the resulting published dissertation, please send me an email under separate cover to tnovak@mail.usf.edu. Thank you for your time and consideration.

Research Procedure and Consent Disclosure
Please check the box below if willing to complete this short research survey.

☐ I am willing to take this research survey (1)
Q1 Which answer best describes your current position or role at your GME teaching institution?

- GME Program Director for Primary Care Residents (1)
- GME Program Director for Specialty Residents (2)
- GME Program Director for Fellowship Sub-Specialty Program (3)
- Former GME Program Director for Residency or Fellowship Program (5)
- Other (4) ___________________________________________________________________

Q2 How many years have you served as a GME Program Director? (If less than a year, please respond 1)

_______________________________________________________________________________

Q3 What is the total number of residents or fellows in your assigned GME program?

_______________________________________________________________________________

111
Q4 Select your medical degree designation:

- MD (1)
- DO (2)

Q5 Do you currently have a Program Co-Director?

- Yes (1)
- No (2)

Q6 How is your GME program geographic location generally designated?

- Urban (1)
- Rural (2)

Q7 Is your GME program affiliated with a research college or university?

- Yes (1)
- No (2)
Q8 Which option best describes your GME Sponsor Institution?

- For Profit Institution (1)
- Not For Profit Institution (2)

Q9 Does your program receive monies from CMS in support of your GME residency program to cover direct and indirect cost?

- Yes (1)
- No (2)
- Not sure (3)

Q10 Which best describes your GME program Institutional Sponsor?

- Multi-facility health system (1)
- Single acute care facility (2)
- Community based facilities with multiple training site locations (3)
- Other (please describe) (4)
Q11 Which of the following best describes your current GME program sponsor institution status? (Multiple responses permitted)

- ACGME Accredited only (1)
- Dually Accredited by AOA and ACGME (2)
- AOA Accredited only (3)
- Pre-Accredited under SAS (4)
- Other (please describe) (5)

Q12 Approximately how many residents or fellows does your GME program matriculate each year?

Q13 Approximately how many full-time faculty (FTE) currently teach in your GME program?
Q14 Approximately how many of your current GME program faculty are volunteers (not paid salary for their GME duties)?

Q15 Please indicate which of the following types of TRAINING are currently offered to your GME PROGRAM FACULTY: (multiple responses permitted)

- teaching assessments (1)
- evidence-based medicine (2)
- team building skills (3)
- research methods (4)
- scientific writing skills (5)
- None of the above (6)

Q16 Which of the following are current PROGRAM REQUIREMENTS of your GME FACULTY MEMBERS? (Multiple responses permitted)

- Must maintain personal continuous specialty certification (1)
- Receive competitive research funding (2)
- ABMS certified (3)
- Provided access to sub-board-certified sub specialty faculty (4)
- None of the above (5)

Q17 Please indicate which of the following descriptions SPECIFICALLY APPLIES TO YOU as a GME Program Director: (Multiple responses permitted)
Q18 Which of the following activities are CURRENTLY COMPLETED by your GME PROGRAM COORDINATOR? (Multiple responses permitted)

- Resident support activities (1)
- Board communications (2)
- Medical malpractice coverage (3)
- Medical licensure (4)
- Program faculty personnel file maintenance (5)
- Program residents personnel file maintenance (6)
- GME program accreditation coordination (7)
- National Residency Matching Program (NRMP) coordination (8)
- None of the above (9)
Q19 Do any of your GME program residents or fellows exceed 80 duty-hours per week?

- Yes (1)
- No (2)
- Not Sure (3)

Q20 Which of the following items are CURRENTLY PROVIDED to your GME program residents or fellows? (Multiple responses permitted)

- access to simulation labs to practice procedural and communications skills such as huddles and crew resource management (2)
- access to a research facility as part of their GME training (3)
- access to research faculty as part of their GME training (4)
- access to program support service personnel (5)
- access to other GME residency programs if required in their training (6)
- None of the above (7)

Q21 Which of the following SUBJECT AREAS are CURRENTLY TAUGHT to your residents or fellows? (Multiple responses permitted)

- Quality Improvement Projects (QIPS) as part of didactic training in support of Center of Medicare & Medicaid Services (CMS) (1)
- Team-based quality improvement projects (2)
- Real-world aspects of patient safety investigation/root cause analysis and failure modes and effects analysis (3)
- Clinical Learning Environment Review (CLER) program training determining
the quality of the hospital/health system workplace and collaboration engagement of residents within the clinical system (4)

○ Joint Commission’s national patient safety goals training (5)

○ Residents working with local health facilities safety and quality initiatives (6)

○ None of the above (7)

Q22 Which of the following best describes activities related to your GME program “cost analysis” impacts of moving from AOA accreditation to ACGME accreditation under the new Single Accreditation System (SAS)?

○ We are in the process of conducting detailed program cost analysis related to SAS (2)

○ We have conducted detailed program cost analysis related to SAS (1)

○ We will require outside consulting to conduct a detailed cost analysis related to SAS (3)

○ We do not plan to conduct a detailed program cost analysis related to SAS (4)

○ None of the above (5)

Q23 Which answer best describes the anticipated affect of the new Single Accreditation System (SAS) on the future size of your GME residency program?

○ Plan to maintain same number residents (1)

○ Plan to reduce number of residents (2)

○ Plan to expand number of residents if permitted (3)

○ Plan to discontinue our residency program (4)

○ Uncertain of the future disposition of our GME program at this time (5)
Q24 Which of the following would you consider to be a significant benefit of the new Single Accreditation System in contrast to your previous or current accreditation system? (Multiple responses permitted)

- Maintains consistent evaluation and accountability for competency of resident physicians across all accredited graduate medical education programs (1)
- Eliminates duplication in GME accreditation (2)
- Achieves efficiencies and cost savings for institutions currently sponsoring "dually" or "parallel" accredited allopathic and osteopathic programs (3)
- Ensures all residencies and fellowship applicants are eligible to enter all accredited programs in the United States, and can transfer from one accredited program to another without repeating training and without causing the Sponsoring Institution to lose Medicare funding (4)
- None of the above (5)

Q25 Do you think your residency program could afford to operate at your current sponsor facility without CMS financial support to off-set direct and indirect program costs?

- Definitely yes (1)
- Probably yes (2)
- Not sure (3)
- Probably not (4)
- Definitely not (5)
Q26 Which single response below best describes your current GME program status related to the Single Accreditation System (SAS)?

- We do not plan to apply to SAS (1)

- We have not yet decided if we will apply to SAS (2)

- We are in the process of applying to SAS but not yet submitted our application (3)

- We have already submitted our SAS and have been assigned "Pre-Accreditation Status" but no ACGME Review Committee site visit has taken place yet (4)

- We have been assigned "Continued Pre-Accreditation Status" under SAS after our ACGME Review Committee site visit (5)

- We have been granted "Initial Accreditation" status under SAS after our ACGME Review Committee site visit (6)

- Other (please describe) (7)

End of Block
Appendix B

Accreditation of AOA-Approved Programs

AOA-Approved Program

- Yes: Program is under ACGME-accredited sponsoring institution
  - Yes: Sponsoring institution applies for ACGME accreditation
    - Yes: Program cannot apply under the terms of the agreement among the ACGME, the AOA, and AADOM; program begins standard ACGME application process at any time through the ACGME office of the ACGME-accredited sponsoring institution
    - No: Program submits ACGME application with ACGME-accredited sponsor endorsement
      - Yes: Program receives "Pre-Accreditation Status" as of July 1, 2015
      - No: Program had matriculated residents/fellows as of July 1, 2015
        - Yes: Review Committee assesses substantial compliance with current ACGME requirements
        - No: Program AOA-Approved as of July 1, 2015

- No: Program AOA-Approved as of July 1, 2015

<table>
<thead>
<tr>
<th>Program AOA-Approved as of July 1, 2015</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program has matriculated residents as of July 1, 2015</td>
<td>A</td>
<td>C</td>
</tr>
<tr>
<td>No</td>
<td>B</td>
<td>C</td>
</tr>
</tbody>
</table>

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### Program Accreditation

**How do programs approved by the American Osteopathic Association (AOA) become ACGME-accredited?**

Under the terms of the agreement among the ACGME, the AOA, and AACOM, there are **three pathways to ACGME accreditation**:

- **Pathway A.** Programs that are AOA-approved and have matriculated residents as of July 1, 2015, and that apply for ACGME accreditation between July 1, 2015 and June 30, 2020, will be granted “pre-accreditation status.” For these programs:
  - Co-program directors may be appointed (one American Board of Medical Specialties (ABMS)-certified and one AOA-certified). This table shows which Review Committees will consider an AOA-certified program director.
  - AOA Board certification is considered acceptable for faculty members to satisfy the requirement for faculty board certification.

### Frequently Asked Questions: Single Accreditation System

**Accreditation Council for Graduate Medical Education (ACGME)**

These FAQs address elements of the single accreditation system resulting from an agreement among ACGME, the American Osteopathic Association (AOA) and the American Association of Colleges of Osteopathic Medicine (AACOM). Please refer to the ACGME Descriptions and Definitions for clarification on some of the terms used in this document.

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pathway B.</strong> Programs that are AOA-approved as of July 1, 2015 with no matriculated residents as of that date that apply for ACGME accreditation between July 1, 2015 and June 30, 2020, will be granted “pre-accreditation status.”</td>
<td></td>
</tr>
<tr>
<td><strong>Pathway C.</strong> AOA-approved programs that do not meet the criteria in A or B above may apply at any time for ACGME accreditation, but will not benefit from the terms of the agreement.</td>
<td></td>
</tr>
</tbody>
</table>
| **What is the process for an AOA-approved program to become ACGME-accredited?** | Prior to an AOA-approved program submitting an application for Initial Accreditation, its Sponsoring Institution must have, or must apply for, ACGME institutional accreditation (see additional detailed information under Institutional Accreditation below).

The application period for Sponsoring Institutions began April 1, 2015.

Upon receipt of a completed institutional application, the ACGME will assign “pre-accreditation status” to the institution, and once that occurs, the institution’s AOA-approved programs can begin the application process for Initial Accreditation with the ACGME. A list of institutions with pre-accreditation status is available on the ACGME website.

As of July 1, 2015 programs can apply for Initial Accreditation through the ACGME’s Accreditation Data System (ADS).

The Sponsoring Institution’s designated institutional official (DIO) must endorse the submission of an application in ADS, which releases the application to the pertinent Review Committee. |
Appendix C

GME SINGLE ACCREDITATION SYSTEM
PUBLISHED GOALS AND BENEFITS

Frequently Asked Questions: Single Accreditation System
Accreditation Council for Graduate Medical Education (ACGME)

These FAQs address elements of the single accreditation system resulting from an agreement among ACGME, the American Osteopathic Association (AOA) and the American Association of Colleges of Osteopathic Medicine (AACOM). Please refer to the ACGME Glossary of Terms for clarification on some of the terms used in this document.

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benefits</td>
<td>A single accreditation system will promote improved health and health care for the public by enhancing the education of the next generation of physicians.</td>
</tr>
<tr>
<td>What are the benefits of the single accreditation system?</td>
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<tr>
<td></td>
<td>The single accreditation system is intended to achieve four significant benefits:</td>
</tr>
<tr>
<td></td>
<td>1. Establish and maintain consistent evaluation and accountability for the competency of resident physicians across all accredited graduate medical education (GME) programs.</td>
</tr>
<tr>
<td></td>
<td>2. Eliminate duplication in GME accreditation.</td>
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<tr>
<td></td>
<td>3. Achieve efficiencies and cost savings for institutions currently sponsoring &quot;dually&quot; or &quot;parallel&quot; accredited allopathic and osteopathic programs.</td>
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<tr>
<td></td>
<td>4. Ensure all residency and fellowship applicants are eligible to enter all accredited programs in the United States, and can transfer from one accredited program to another without repeating training, and without causing the Sponsoring Institutions to lose Medicare funding. (See Appendix 1: Eligibility for Residency and Fellowship for additional detailed information.)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
</table>
Appendix D
Memorandum of Understanding

Executive Summary of the Agreement among ACGME, AOA, and AACOM

There are four broad dimensions to the Agreement among ACGME, AOA, and AACOM.

The first dimension of the Agreement focuses on AOA-approved residency programs. There are several provisions to facilitate the accreditation of current AOA-accredited programs into the broadened accreditation system. (1) AOA-approved training programs in existence on July 1, 2015, may elect to apply for ACGME accreditation, and, by applying, gain “pre-accreditation” status from July 1, 2015 up to June 30, 2020 (transition period) (unless and until the program achieves ACGME accreditation, or chooses withdraw its application). (2) Certification by the relevant AOA specialty board of AOA-approved program faculty will be a certification credential acceptable to the relevant Review Committee for faculty in programs applying for ACGME accreditation during this five year period. (3) AOA-approved training programs may retain their AOA approval as long as they continue to meet AOA approval standards during the transition. (4) Osteopathic Postdoctoral Training Institutions (OPTIs) may apply for and be recognized as sponsoring institutions of ACGME-accredited training programs. (5) It will be acceptable for ACGME accredited programs to have co-program directors, one certified by an ABMS specialty board (or having credentials otherwise acceptable to the relevant ACGME specialty Review Committee), and another certified by an AOA specialty board. The ABMS specialty board certified program director must possess qualifications and perform job duties in full compliance with ACGME common and specialty requirements.

The second dimension of the Agreement is clarification of the eligibility of osteopathic graduates to enter advanced training in ACGME-accredited programs. (Graduates of osteopathic medical schools will continue to be eligible for initial training in ACGME-accredited programs.) During the transition period, physicians who graduate from programs with pre-accreditation status will be eligible for entry into ACGME accredited advanced standing residencies and fellowships determined by specialty specific eligibility standards that that were in effect on June 30, 2013, rather than the eligibility standards that will take effect in July, 2016. Once a program achieves ACGME accreditation, graduates will be from an ACGME accredited program, and will be eligible for all advanced training positions in all ACGME-accredited programs.

The third dimension of the Agreement discusses osteopathic medical principles within ACGME. The ACGME Residency Review Committees for which there are osteopathic programs will have one or more full voting osteopathic members. In addition, two new committees will be created within the ACGME. The first of these will be the Osteopathic Principles Committee, whose role will be to establish standards and evaluate program compliance in the Osteopathic Principles dimension of residency training; this will provide for programs to be recognized as offering training in Osteopathic Principles. The second will be the Neuromusculoskeletal Review Committee, which will set standards and render accreditation decisions for neuromusculoskeletal and osteopathic manipulative medicine programs.

The fourth dimension of the Agreement is the incorporation of AOA and AACOM in the governance structure of ACGME. AOA and AACOM will become full members of the ACGME upon approval of the necessary changes to the ACGME bylaws (on or before September 30,
Executive Summary of the Agreement among ACGME, AOA, and AACOM Explained

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(2) Certification by the relevant AOA specialty board of AOA-approved program faculty will be a certification credential acceptable to the relevant Review Committee for faculty in programs applying for ACGME accreditation during this five year period.

(3) AOA-approved training programs may retain their AOA approval as long as they continue to meet AOA approval standards during the transition.

(4) Osteopathic Postdoctoral Training Institutions (OPTIs) may apply for and be recognized as sponsoring institutions of ACGME-accredited training programs.
Appendix D
(CONT)

(5) It will be acceptable for ACGME accredited programs to have co-program directors, one certified by an ABMS specialty board (or having credentials otherwise acceptable to the relevant ACGME specialty Review Committee), and another certified by an AOA specialty board. The ABMS specialty board certified program director must possess qualifications and perform job duties in full compliance with ACGME common and specialty requirements.

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9/26/2014 Direct Quote from Source Listed

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Appendix E

Graduate Medical Education (GME) Terms

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>AAMC</td>
<td>Association of American Medical Colleges</td>
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<tr>
<td>ABMS</td>
<td>American Board of Medical Specialties</td>
</tr>
<tr>
<td>ACCME</td>
<td>Accreditation Council for Continuing Medical Education</td>
</tr>
<tr>
<td>ACGME</td>
<td>Accreditation Council for Graduate Medical Education</td>
</tr>
<tr>
<td>ADS</td>
<td>Accreditation Data System</td>
</tr>
<tr>
<td>AHA</td>
<td>American Hospital Association</td>
</tr>
<tr>
<td>AMA</td>
<td>American Medical Association</td>
</tr>
<tr>
<td>AMA-CME</td>
<td>American Medical Association – Council on Medical Education</td>
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<tr>
<td>CAAR</td>
<td>Computer Assisted Accreditation Review</td>
</tr>
<tr>
<td>CCC</td>
<td>Clinical Competency Committee</td>
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<tr>
<td>CBE</td>
<td>Competency-Based Education</td>
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<tr>
<td>CLER</td>
<td>Clinical Learning Environment Review</td>
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<tr>
<td>CMS</td>
<td>Centers for Medicare and Medicaid Services</td>
</tr>
<tr>
<td>CMSS</td>
<td>Council of Medical Specialty Societies</td>
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<tr>
<td>COMLEX</td>
<td>Comprehensive Osteopathic Medical Licensing Examination</td>
</tr>
<tr>
<td>CRCC</td>
<td>Council of Review Committee Chairs</td>
</tr>
<tr>
<td>CRCR</td>
<td>Council of Review Committee Residents</td>
</tr>
<tr>
<td>DIO</td>
<td>Designated Institutional Official</td>
</tr>
<tr>
<td>ECFMG</td>
<td>Educational Commission for Foreign Medical Graduates</td>
</tr>
<tr>
<td>ERAS</td>
<td>Electronic Residency Application Service</td>
</tr>
<tr>
<td>FREIDA</td>
<td>Fellowship and Residency Interactive Database (AMA)</td>
</tr>
<tr>
<td>FS</td>
<td>Accreditation Field Staff</td>
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<tr>
<td>FSMB</td>
<td>Federation of State Medical Boards</td>
</tr>
<tr>
<td>GME</td>
<td>Graduate Medical Education</td>
</tr>
<tr>
<td>HIPAA</td>
<td>Health Insurance Portability and Accountability Act</td>
</tr>
<tr>
<td>IRC</td>
<td>Institutional Review Committee</td>
</tr>
<tr>
<td>IRD</td>
<td>Institutional Review Document</td>
</tr>
<tr>
<td>JC</td>
<td>Joint Commission on Accreditation of Healthcare Organizations</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
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<tr>
<td>LCME</td>
<td>Liaison Committee on Medical Education</td>
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<tr>
<td>LON</td>
<td>Letter of Notification</td>
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<tr>
<td>NBME</td>
<td>National Board of Medical Examiners</td>
</tr>
<tr>
<td>PD</td>
<td>Program Director</td>
</tr>
<tr>
<td>PDF</td>
<td>Portable Document Format</td>
</tr>
<tr>
<td>PGY</td>
<td>Post Graduate Year</td>
</tr>
<tr>
<td>PLA</td>
<td>Program Letter of Agreement (for residency and fellowship program)</td>
</tr>
<tr>
<td>NRMP</td>
<td>National Resident Matching Program</td>
</tr>
<tr>
<td>RC</td>
<td>Review Committee</td>
</tr>
<tr>
<td>RQ</td>
<td>Resident Questionnaire (used in Internal Medicine)</td>
</tr>
<tr>
<td>RRC</td>
<td>Residency Review Committee</td>
</tr>
<tr>
<td>SV</td>
<td>Site Visitor</td>
</tr>
<tr>
<td>SSV</td>
<td>Specialist Site Visitor</td>
</tr>
<tr>
<td>TYRC</td>
<td>Transitional Year Review Committee</td>
</tr>
<tr>
<td>USMLE</td>
<td>United States Medical Licensing Examination</td>
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</tbody>
</table>

ACGME Glossary of Terms: July 1, 2013
[https://www.acgme.org/Portals/0/PDFs/ab_ACGMEglossary.pdf](https://www.acgme.org/Portals/0/PDFs/ab_ACGMEglossary.pdf)
Appendix F
IRB Exempt Certification

May 16, 2017
Timothy Novak
COBAs Executive Program
Bradenton, FL 34202

RE: Exempt Certification
IRB#: Pro00030632
Title: Ascertaining institutional level of preparedness for current American Osteopathic Association (AOA) accredited Family Medicine Graduate Medical Education (GME) programs and their sponsoring institutions to meet certain published Accreditation Council for Graduate Medical Education (ACGME) Single Accreditation System (SAS) requirements to receive "initial accreditation" status by the June 30, 2020 deadline.

Dear Mr. Novak:
On 5/15/2017, the Institutional Review Board (IRB) determined that your research meets criteria for exemption from the federal regulations as outlined by 45CFR46.101(b):

(2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless:
(a) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects’ responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects’ financial standing, employability, or reputation.

As the principal investigator for this study, it is your responsibility to ensure that this research is conducted as outlined in your application and consistent with the ethical principles outlined in the Belmont Report and with USF IRPP policies and procedures.

Please note, as per USF IRPP Policy, once the Exempt determination is made, the application is closed in ARC. Any proposed or anticipated changes to the study design that was previously declared exempt from IRB review must be submitted to the IRB as a new study prior to initiation of the change. However, administrative changes, including changes in research personnel, do not warrant an amendment or new application.

Given the determination of exemption, this application is being closed in ARC. This does not limit your ability to conduct your research project.

We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to human research protections. If you have any questions regarding this matter, please call 813-974-5638.

Sincerely,

John Schinka, Ph.D., Chairperson
USF Institutional Review Board