

**Financial Management of Medical Care Expenses of Student-Athletes in Institutions of
Higher Education**

by

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Abstract

Within institutions of higher education, the call for cost containment and accountability extended to all departments, including intercollegiate athletic departments. Intercollegiate athletic departments' spending continued to increase as did the public interest in how this affected and was managed within institutions of higher education already experiencing financial strain. These challenges of higher education finance met the complexities of risk management, insurance, and health care in the management of medical expenses for student-athletes. As athletic department administrators sought more proactive and prudent forecasting and management approaches, objective data on spending in all areas was needed. Furthermore, NCAA institutions were searching for best practices in managing National Collegiate Athletics Association (NCAA) policy requirements/recommendations and increased student-athlete benefit allowances. This study sought to identify expenses applied to institutional budgets and the policies and strategies used within institutions of higher education in the financial management of medical expenses for care of student-athletes. This study focused on those NCAA FBS member institutions, known as the Power Five Conferences, who were granted autonomy by the NCAA in legislation and have commonality in the extent of available resources. This study further sought to identify common practices and discover whether relationships could be identified between the institutional choice of policy or strategy used in the management of medical expenses and the medical expenses applied to institutional budgets.

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Chapter I: Introduction

In the majority of institutions of higher education, athletic spending exceeded athletic revenue (Brady, Berkowitz, & Upton, 2016). In 2013, only 20 institutions in the Football Bowl Subdivision (FBS) generated revenue more than expenses; no Division II or Division III school generated revenue more than operating expenses in 2013 (Burnsed, 2014). In 2015, the 50 public institutions with membership to the Power Five conferences increased revenue by \$304 million and spending by \$332 million from the previous year (Brady et al., 2016). With economic evolution and trends in higher education finance (such as decreased state budgets and institutional endowments and practices of departmental subsidy and institutional transfer of funds) the funding crisis and budgetary issues of athletic departments drew increasing attention and concern (Association for the Study of Higher Education [ASHE], 2015).

Nationally, media attention has increasingly focused on health care, health insurance, what Americans were spending on health care related expenses, and how health insurance policies and medical expenses were managed. From 2013 to 2016, the number of uninsured individuals dropped from 44 million to less than 28 million, with 2016 seeing the lowest percentage of uninsured nonelderly adults in decades at 10.3% (Kaiser Family Foundation [KFF], 2018a). Even with the expansion of coverage beginning in 2014 under the Affordable Care Act (ACA), 45% of uninsured adults reported the high cost of insurance as the primary reason they lacked insurance coverage (KFF, 2018a). In 2016, one out of five uninsured adults did not seek needed medical care because of the cost (KFF, 2018a). The percentage of enrollees spending greater than \$1,000.00 for medical expenses increased from 17% to 24% from 2005 to 2015, which demonstrated the continued increase in out of pocket spending facing workers and their families covered by employer sponsored health insurance plans (Sawyer, Cox, & Claxton,

2017). Out of pocket spending grew 3.9% to \$352.5 billion in 2016, or 11 percent of total National Health Expenditure (Centers for Medicare and Medicaid Services [CMS], 2018).

Health care costs for those participating in collegiate athletics became an area of interest for athletic and university administrators with higher risk exposure, challenges in health insurance benefits, unique applications of cutting-edge medical procedures and approaches, and improvements in regulation, diagnosis, and management of medical conditions resulting from athletic participation. Concern and confusion existed about possible gaps in coverage for a student-athlete injured during participation and the lack of transparency and standardization of institutional policies on how medical care and overall costs were managed within athletic departments (Solomon, 2012). Personal and individual health insurance policies may have benefit limitations based on a range of factors including, but not limited to, the plan's self-determination as a policy of last resort (such as government administered programs), exclusions deeming no coverage or benefits available for athletic injury, and no or limited out of network benefits (National Collegiate Athletics Association [NCAA], 2018a). Such exclusions could leave effectively no benefits under those policies in the management of medical expenses for student-athletes. To address lapses in coverage for intercollegiate athletic injuries and in attempts to mitigate the costs felt by athletic department budgets, institutions may elect to provide a secondary policy for athletes, but the institutional cost could be substantial (Yahn, 2014).

The National Collegiate Athletic Association, in demonstration of the commitment to student-athlete advocacy, enacted legislation and policies regarding insurance coverage and medical care for student-athletes. In 1992, the NCAA began offering members, and therefore the student-athletes at those institutions, access to a catastrophic injury insurance program. This

program served as insurance excess to the coverage the NCAA required institutions certify for medical expenses resulting from athletic related injuries in covered events (NCAA, 2011).

Institutions had various methodologies they used to satisfy the NCAA requirement ranging from self-insurance to commercial policies with various insurance plans, deductibles, and premium options (NCAA, 2016). There was no consistent method or requirement to verify insurance; this may have resulted in a lapse in coverage possibly resulting in significant out of pocket costs to the student-athlete (NCAA, 2011). In 2005, the NCAA enacted legislation requiring member institutions certify coverage of student-athletes for athletic injuries during covered events; this coverage was required to be of equal or greater value than the NCAA catastrophic injury insurance program's deductible (NCAA, 2011). It was the responsibility of the institution to determine what method(s) of insurance coverage certification best met institutional needs and missions (NCAA, 2011). Failure to comply with the insurance certification requirement was stated as a violation of NCAA membership obligations with potential resulting loss of NCAA membership (NCAA, 2011).

The NCAA, and the institutions that constituted its membership, had discussions regarding student-athlete benefits, also touching on the issues of injuries, medical care, and insurance. In 2016, the NCAA surveyed NCAA Division I institutions to assess the coverage that existed at member institutions and the responsibilities of institutions and student-athletes (if applicable) for medical care (Burnsed, 2016). The survey provided new insight into institutional practices for insurance and management of medical care expenses regarding student-athletes. No data were published on the medical expenses assumed by the participating institutions or the relationship (if any) between management practices and medical care expenses. In May of 2018, the NCAA issued recommendations to assist member institutions in policy development and cost

control in the management of student-athlete insurance and medical expenses (NCAA, 2018a). As recommended, monitoring spending and insurance trends of student-athletes' medical care and collaborative policy development and management could provide data to guide institutional best practice choices (NCAA, 2018a).

Statement of Purpose

The purpose of this study was to identify, evaluate, and compare the expenditures, policies, and strategies associated with the management of medical care expenses for student-athletes among institutions of higher education as members of the Power Five conferences. This study aimed to identify the approximate costs applied to athletic institutional budgets for the medical care of student-athletes in intercollegiate athletics. This study also aimed to identify what policies and strategies institutions implemented regarding medical expenses and insurance. This study further aimed to determine if relationships existed among policies and strategies employed by an institution and the institution's medical care expenditures.

Research Questions

The following research questions were examined in this study:

- RQ1: What are the annual costs of medical care expenses for student-athletes in intercollegiate athletics?
- RQ2: What costs are institutions covering for medical care of student-athletes?
- RQ3: What are the policies utilized by institutions of higher education in the management of medical care expenses? What effect do policies have on medical expenses (if any)?

- RQ4: What are the medical expenses coordination and management strategies utilized by institutions of higher education in the management of medical care expenses?

What effect do strategies have on medical expenses (if any)?

Significance of the Study

The ever-changing nature of institutional finance in higher education, the rising cost of health care, and the evolution of insurance and medical care converged in the management of medical expenses for the student-athlete. Institutions of higher education, athletic departments specifically, must become aware of how to manage medical care and financial loss for student-athletes within this arena of expanding complications and limitations (NCAA, 2018a). The increasing strain of rising expenses assumed by athletic department institutional budgets continued in a time calling for greater financial accountability and fiscal responsibility throughout higher education systems. Medical and administrative stakeholders were advised to realize not only current practices but best practices, both medically and financially, in the management of such expenses to ensure responsibilities are met (NCAA, 2018a). As the call for cost accountability and spending containment in NCAA member institution athletic departments continued, as did the issues and costs associated with health care nationally, identifying approximate costs and the methods of management of the medical care expenditures in institutions of higher education could assist in proactive, effective policy development and appropriate budget planning.

Limitations

Based on literature review and in accordance with the methodology in this study, the limitations associated were:

- Differences in institutional reporting systems and accounting methodologies may result in inconsistencies in reports respondent may reference
- NCAA financial reporting systems may be viewed as inconsistent or concerns may be expressed regarding reports failing to account for expenditures/revenues accurately and consistently
- Respondent may not feel s/he had institutional authority to respond to all questions (release of information restrictions as directed by institutional policies)
- Survey could be interpreted as excessive in length
- Inclusion criteria resulted in limited sample size
- Survey of medical expenses limited to categories (ranges)
- Limited peer reviewed literature on the topic and the related fields as applicable to institutions of higher education, intercollegiate athletics, and medical expenses

Delimitations

In accordance with the methodology in the study, the delimitations associated with data collection and analysis were:

- For medical expense data, ranges of expenditures were utilized; intended to increase response rate by not requiring specific or participant driven amounts
- Only the sixty-five institutions composing the NCAA Power Five autonomy conferences were eligible institutions
 - Institutions of similar financial ability and resources were used
 - Reduced the possible impact of variances in financial resources that would occur if all NCAA Division I, II, & III comprised the sample

- Provided insight into practices and management utilized when institutions have greater resources as well as assumed greater access to medical innovations and institutional brand recognition

Assumptions

The assumptions for this study were:

- All data collected, via survey participant or existing data, were accurate
- All policies and strategies reported were in use during the applicable time frame of data collection
- Institutions were not individually identified in publications/presentations; institutional identity was collected but institutional code was used for all analysis
- All information was presented in aggregate/group/category form

Definitions

- **Aggregate Attachment Point:** dollar amount or loss ratio stated in commercial policy met by insured; insurance covers aggregated losses that exceed this point (Elliot, 2012).
- **Aggregate deductible:** deductible met when sum of payments made by institution reaches a predetermined amount by institutional payments (deductible); portion of a covered loss paid by the insured prior to the policy/insurer's financial responsibility (Elliot, 2012).
- **Aggregate insurance plan:** type of insurance policy institution may purchase to cover athletic related injuries; insurance layer begins when deductible exceeded (NCAA, 2018c).
- **Athletic injury/illness:** injury/illness resulting directly from covered event/institutionally sanctioned activity or event.

- Commercial Liability Insurance: types of insurance that cover liability losses for businesses, professionals, government entities, educational institutions, and religious and charitable organizations (Malecki & Flitner, 1998).
- Consumer Directed Healthcare: plans for healthcare where insured shares more financial responsibility; intended to encourage cost consciousness and containment; HDPs are an example (Rosato, 2018).
- Covered event/institutionally sanctioned activity or event: NCAA Bylaw 3.2.4.8.3:

A covered event includes the following: (*Adopted: 4/28/05 effective 8/1/05*) (a) Any intercollegiate sports activity, including team travel, competition, practices and conditioning sessions during the playing season (as defined in Bylaw 17.1.1);(b) An NCAA-sanctioned competition in which the insured person is an official competitor; or (c) Practice and conditioning sessions that are authorized, organized or directly supervised by athletics department personnel at the member institution other than during the playing season. Such sessions must occur on campus or at approved off-campus facilities as part of an intercollegiate athletics activity. For insured student-athletes or prospective student-athletes who compete in individual sports, off-campus intercollegiate athletics activities must be authorized by athletics department personnel at the participating school and take place at approved locations. (NCAA, 2017a, pp 10-11).
- Covered Losses: situation or event where insurance pays for losses; events for which the insurance pays (Luthardt, Smith, & Wiening, 1999).

- Deductible: portion of a covered loss paid by the insured prior to the policy/insurer's financial responsibility (Elliot, 2012); the deductible is subtracted from the amount the insurer would be financially responsible for (Luthardt et al., 1999).
- Exclusions: policy provision that eliminates coverage for specific events, situations, or conditions (Luthardt et al., 1999).
- Fully insured insurance plan: type of insurance policy institution may purchase to cover athletic related injuries; premium paid to insurer and then claims are paid according to the terms and conditions of policy (NCAA, 2018c).
- Football Bowl Subdivision (FBS): (formerly NCAA Division 1-A); 10 conferences and 130 schools were in the FBS (Power Five and Group of Five) at the time of this study; College Football Playoff determines national championships in this division; must meet requirements of NCAA Bylaw 20.9.9 (NCAA, 2017a).
- Football Championship Subdivision (FCS): (formerly NCAA Division 1-AA); national champion is determined through 24 team single elimination tournament; must meet requirements of NCAA Bylaw 20.9.10 (NCAA, 2017a).
- Group of Five Conferences/Institutions: American Athletic Conference, Conference-USA, Mid-American Conference, Sun Belt Conference, Mountain West Conference; these conferences comprise 5 of the 10 conferences in the FBS; members generally have less resources than members of the Power Five conferences.
- Health Reimbursement Account (HRA): account with tax advantages; used to pay for qualified medical expenses (Waters, Chang, Cecil, Kasteridis, & Mirvis, 2011).

- Health Savings Account (HSA): tax advantaged health savings accounts used to pay for qualified medical expenses with HDPs; rollover optional for unused funds (Rosato, 2018).
- High Deductible Plans (HDP)/ High Deductible Health Plans (HDHP): plans characterized by higher deductibles but smaller premiums (Rosato, 2018).
- Medical expenditure/medical expense: dollar amount paid from athletic department budget to outside medical provider(s) for services; excludes any costs associated with contracts, professional services agreements, or salaries/benefits associated with university employment of medical professionals to serve the student-athlete population.
- National Collegiate Athletic Association (NCAA): a nonprofit association formed in the early 20th century which regulates the intercollegiate athletic programs (Barr, 1999).
- NCAA Catastrophic Policy: policy provided by the NCAA for member institutions providing excess accident medical benefits for eligible injuries and additional benefit for defined disabling injuries (NCAA, 2018c); benefits begin when the deductible has been met by the institution for eligible expenses for a covered event.
- NCAA Catastrophic Injury Insurance Policy Deductible:

The policy deductible is the total amount of eligible medical expenses that must be incurred as a result of an injury sustained during a Covered Event before the benefits under the NCAA catastrophic policy will be available. The deductible must be met within two years following the date of injury. The deductible is \$90,000. [Note: The deductible is \$75,000 for those institutions that participate in the NCAA Group Basic Accident Medical Program] (NCAA, 2018b, p. 1).

- NCAA Division I: with close to 350 members, these institutions house the largest student bodies, manage the largest athletics budgets, and offer a greater number of scholarships; football programs are divided between FBS and FCS; all other sports are simply NCAA DI designation (NCAA, 2019).
- Non-athletic injury/illness: an injury or illness not resulting from covered event/institutionally sanctioned activity or event; non-athletic injuries or illness may include (but are not limited to) sickness, preventive care, emergency medicine, mental health, etc.
- Power Five Conferences: the 65 wealthiest DI institutions (Wolverton, 2014); these include the Atlantic Coast Conference (ACC), Big Ten Conference (Big Ten), Big 12 Conference, Pac-12 Conference, and Southeastern Conference (SEC); members have autonomy in certain areas as defined in NCAA bylaws 5.02.1.1 (NCAA, 2017a).
- Private health insurance: comprehensive private plan (including HMO, PPOs, etc); includes employer sponsored, government/public health, or purchased plans (Claxton, 2002).
- Public health plan coverage: includes Medicaid, Medicare, federal and state employee health plans, military plans, and the Veterans Administration (Claxton, 2002).
- Reinsurance: contractual arrangement transferring some/all of potential costs of insured losses from the policy of one insurer to another; the primary insurer is the entity transferring the loss exposure; the reinsurer is the entity accepting those loss exposures; reinsurer reimburses primary insurer based on policy language (Luthardt et al., 1999).
- Self-Insurance: practice where an organization pays for some or all of its losses with its own fiscal resources rather than purchasing insurance (Luthardt et al., 1999); in self-

funded arrangements, the organization's own funds are used, and the terms are set forth in a plan document similar to those found in an insurance policy (NCAA, 2018c).

- Third Party Administrators (TPAs): entity (such as a business firm) providing administrative services, such as claims management, to other entities/organizations (Luthardt et al., 1999).

Organization of the Study

This study was conducted to gain insight into the management of medical expenses for student-athletes within institutions of higher education within the Power Five Conferences. The intent was to provide an understanding of what costs were applied to institutional budgets for the medical care of student-athletes and what interventions, through policy development and cost reduction strategies, these institutions employed to affect those expenses. Chapter 1 introduced the research focus and the review of the study's intent. Chapter 2 provided a review of existing literature in the related fields of risk assessment, insurance and medical costs, higher education institutional and athletic department finance and spending trends, and pertinent policy and background as applied to the NCAA and institutional management of student-athletes. Chapter 3 detailed the methods utilized in conducting this study including purpose and design, identifying participants, review of the procedures, data collection, and analysis. Chapter 4 provided the resulting findings of the data collected. Chapter 5 presented an overall summary of the study as well as discussion and conclusions revealed through data analysis, potential implications, and recommendations for future study.

Chapter II: Literature Review

Nationally, increasing attention has fallen on the healthcare system in the United States. The rise in not only the costs of health care but the increased cost sharing measures resulted in many Americans facing significant financial concerns (Richman & Brodie, 2014). Issues of complexity, fragmentation, and unclear authority and responsibility of and within the healthcare system resulted in failures of this system to be effective, fiscally responsible, and efficient for patients, clinical professionals, and administrators (Evans & Fleming, 2017). In recent decades, the evolution of health care and policy development resulted in issues of access to medical care, insurance coverage for medical care expenses, and the growing costs of health care became concerning on a national and personal level (Hamel et al., 2018).

Responsible and effective financial management involved aligning risk management programming with institutional missions, regulatory bodies, and financial goals. The issues and challenges confronting athletic department administrators concerning the medical care of student-athletes were evolving in terms of medical care, medical care expenses, and management in policy and finance. It was recommended that managers stay aware of not only current trends in medical care and expense management, but also the strategies, policies, and best practices that can assist in mitigating the impact of the growing expenditure (NCAA, 2018a). Through proactive policy and effective management decisions, the financial loss for medical care expenses of student-athletes may be managed while exceeding the minimum legislated requirements and providing appropriate levels of care and coverage (NCAA, 2018a).

Risk Management

Prudent organizations, including departments within institutions of higher education, were recommended to collaborate with professionals from various backgrounds and consider risk

management and risk financing goals when working to mitigate losses (NCAA, 2018a). Proper risk management is an ongoing process that should be continually and critically evaluated for changes in an organization's mission, resources, and activities as well as the resulting exposure to loss, costs of alternative risk management approaches, evolving requirements, and the economic environments which impact the organization (Baranoff, Harrington, & Niehaus, 2005).

Risk is the uncertainty of an outcome and can be positive or negative (Baranoff et al., 2005). Hazard risk, also known as pure risk, is a primary focus of traditional risk management and is a type of insurable risk (Elliot, 2012). Accidental losses are a type of hazard risk that are unintended, and these losses usually carry negative implications (Baranoff et al., 2005). Risk financing techniques are used to manage liability loss exposures and “include insurance, noninsurance transfers (such as hold harmless agreements), retention, and various combinations of retention and insurance” (Maleccki & Flitner, 1998, p. 35).

Insurance is used by businesses and organizations to protect assets from unexpected events causing financial hardship (Luthardt et al., 1999). “Insurance is a risk management technique that transfers the potential financial consequences of certain specified loss exposures from the insured to the insurer” (Elliot, 2012, p. 4). It is an example of transfer as the insured (organization) seeks to transfer chance of financial loss to the insurance company through a contract stipulating which potential losses are transferred and what the organization will pay to have those losses covered (Luthardt et al., 1999). The organization seeks to transfer the possibility of larger financial costs or losses to the insurer by payment of premium fees (Elliot, 2012). The insurer, by accepting the premium, agrees to pay the organization's losses, as stipulated by the insurance policy, outside any risk retained by the organization. Retained risks (such as a deductible, co pays, co-insurance, etc.) remain assumed by the organization under the

policy (Elliot, 2012). When loss exposure included accidental losses, the insurer could best calculate adequate premiums through evaluating loss history and estimating future losses, negating other potential influences which apply to non-accidental losses (Luthardt et al., 1999). The primary risk management technique used to finance liability losses is commercial liability insurance (Malecki & Flitner, 1998).

Risk financing techniques are used to assist organizations with liability loss exposures (Malecki & Flitner, 1998). Risk retention is a form of risk financing where the organization maintains the ability to pay loss costs through internal funds verses purchase of insurance (Elliot, 2012). Risk retention could be the most cost-effective risk financing technique even if insurance options are available (Elliot, 2012). Retention is either funded (where the organization ensures advanced funding to cover the costs of losses associated with the event prior to the occurrence of the event) or unfunded (where the organization lacks advanced funding for consequences of an event) (Elliot, 2012). Retaining smaller expected losses, as compared to fully insuring against all losses, results in lower premium costs to the organization; by retaining the risk of smaller losses and reducing the insurance premiums, organizational savings may be realized (Malecki & Flitner, 1998). For example, an institution may choose to pay out of pocket for claims up to a contractually determined deductible amount and then transfer losses that exceed that amount to the insurer (i.e., the policy) (Malecki & Flitner, 1998). Through this combination method, the institution retains some risk of loss by self-insuring and then transferring losses above a predetermined deductible to an insurance policy. By minimizing the cost of transferred risk and retaining some risk when deemed in the organization's best interest, greater savings may be realized and greater transfer costs may be avoided (Elliot, 2012). When an organization can reduce its risk expenses (premiums) and retained risk costs (expenses) while meeting the

organization's needs and obligations, effective and responsible financial management occurs. Managing the cost of risk is "the primary measure used by many organizations to gauge the effectiveness of their insurance risk program" (Elliot, 2012, p.9).

Reinsurance expands the capacity of the organization by transferring some or all the financial consequences covered under an insurance policy; it is used to protect the organization from a catastrophic event resulting in financial destruction (Elliot, 2012). Not all of the organization's risk is transferred to the policy by reinsurance; a portion of the original liability is typically retained by the organization and this is depicted within the reinsurance agreement (Elliot, 2012). Reinsurance functions to increase capacity for assuming risks, provide financial protection against catastrophic losses, stabilize ups and downs of loss experiences, provide surplus relief, facilitate withdrawal from market segment, and provide underwriting guidance (Elliot, 2012).

Captive insurance plans, an approach in addressing hazard risk, are defined as organizations or groups collectively forming an insurance plan (the captive), collecting premiums, issuing policies, and paying covered losses (Elliot, 2012). These plans have become more common for organizations to reduce overall cost of risk while maintaining more control (Elliot, 2012). Most organizations participating in captives will purchase reinsurance to assist in covering large losses (Elliot, 2012). These options often function by retaining losses up to a predetermined point and then transferring (typically higher severity) losses beyond that point (Elliot, 2012). An organization's choice to participate in a captive insurance plan should result from an evaluation based on the organization's needs and obligations, as well as the disadvantages and advantages of using the captive compared to other risk financing techniques (Elliot, 2012). Advantages include (but are not limited to) cost of risk reduction, access to cash

flow from plan investment income, and obtaining insurance that may not be available through other sources (Elliot, 2012). Disadvantages include (but are not limited to) startup costs and required financing at formation, sensitivity to losses and membership forecasting loss errors, and pressures from the parent organization for desired management with limited attention to fiscal responsibility (Elliot, 2012).

Health Insurance

Health insurance coverage protects enrolled people from large financial losses if they become ill or injured and safeguards access to care when needed (Claxton, 2002; Torpy, Burke, & Glass, 2007). Private health care products spread the risk of financial loss across a larger number of people, thereby making the cost of health care affordable to most people (Claxton, 2002). Healthcare insurance is available through both public (government employee or sponsored plans such as Tricare, Medicare, Medicaid, etc) or private sources (i.e. Blue Cross Blue Shield and United Healthcare) (Claxton, 2002). Government sponsored plans are made available to individuals who meet the criteria and circumstances the plan covers (Torpy et al., 2007). Medicare is such a plan available to US citizens age 65 or older, the disabled, or individuals with some other chronic qualifying condition (Torpy et al., 2007). Medicaid is available for individuals in low-income households or the disabled not meeting the Medicare qualifications (Torpy et al., 2007). Private health coverage primarily comes from state licensed health insuring organizations or self-funded employee benefits plans (Claxton, 2002). Employer sponsored plans are the predominance of private coverages (Claxton, 2002). Those without access to employer sponsored plans or public plans may purchase coverage plans (Claxton, 2002).

In recent decades, the American healthcare marketplace has been dominated through the system of third-party payer health insurance including both government and private sponsored plans. Under this structure medical expenses for a covered beneficiary, in this case the patient, are paid by the third-party insurer directly to the health care provider or facility, less the cost shared portion paid by the patient. Cost sharing portions include deductibles, coinsurance, or co-pays and are costs which must be paid by the patient before plan benefits become available (CMS, 2014). A third-party payer may have tiers and variations in coverage within its healthcare plan with stipulations on how, by whom, and when services are provided. These variations may change the amount of coverage a patient can expect from the insurance plan for medical services. Many third-party insurance plans establish healthcare networks for their patients to receive services. These networks of providers have contracted with the insurance carrier to provide services, typically with financial benefits of negotiated reductions in cost of services. When patients choose services from providers or facilities other than the established networks of preferred providers, the patient may assume a greater share, or possibly all, of the financial responsibility when utilizing these out of network providers. Exclusions are an additional aspect of plans which can affect the patient's coverage; these are areas of coverage that are excluded by the policy, and therefore no financial support is offered in these cases and the patient assumes all responsibility for the expenses of excluded services (Luthardt et al., 1999).

More recently, a plan option known as a high deductible plan (HDP) has seen an increase in utilization and enrollment. High deductible plans may also be known as high deductible health plans (HDHP) or consumer-directed health plans (CDHP). These plans are a health insurance option characterized by smaller premium and more out of pocket cost passed on to the patient before the plan begins to assume its portion of medical bills. Health Savings

Accounts (HSA) and Health Reimbursement Accounts (HRAs) are pre-tax savings accounts designed to accompany the HDP (Waters et al., 2011). Funds in the HSA or HRA funds are utilized by the patient to cover the out of pocket expenses before the HDP begins financial support (Waters et al., 2011).

HDP enrollment “grew more than 40% in 2006, 34% in 2007, and 31% in 2008, going from 3.2 million enrollees in January 2006 to more than 8 million in January 2009” (Waters et al., 2011, p. 156). Accounting for 13% of employers plans in 2012, employers are drawn to these plans for their employee coverage because they have lower premiums than traditional health plans (Gupta & Polsky, 2012). HDP enrollment for those under the age of 65 saw an increase from 39.4% in 2016 to 43.7 % in 2017 (Cohen, Zammitti, & Martinez, 2018). Cohen et al., in 2017, reported 43.7% of those under 65 years of age with private insurance were enrolled in HDPs- this figure includes 18.2% who were enrolled in HDPs with accompanying HSAs (2018). HDP enrollment was not associated with a significant change in overall outpatient expenditures (Waters et al., 2011).

Through these plans, the theory of consumer directed healthcare is put into practice with the thought that if the patient has more financial responsibility, the patient will take more of an active role in cost control. Sharing the cost should decrease overall medical bills by having the patient not elect to use unnecessary medical services (Rosata, 2017). HDPs did benefit the low-cost user (Waters et al., 2011). HDPs had been associated with reduction in expenditures but there was limited definitive association regarding the issue of quality of care, acknowledging that such studies would require assessments over greater time (Gupta & Polsky, 2012). It remained unclear if HDPs were associated with lower costs; many other factors affected use and therefore overall costs including age, patient use, patient education, health of enrollee, etc. (Gupta &

Polsky, 2012). A variety of reasons were given for HDPs enrollment: the younger/healthier individuals did not anticipate significant healthcare needs; patients who were chronically ill or anticipating large expenditures anticipated cost savings once the deductible was met; patients seeking greater personal control; and greater ease in covering some specific health care needs (Waters et al., 2011). Opponents of this approach cited insured individuals delaying needed health care resulting larger bills in the end (Rosata, 2017). Those older and sicker patients in HDPs were encouraged to seek less care initially, resulting in higher morbidity and expenditures for these enrollees (Waters et al., 2011). In 2012, Gupta and Polsky examined the effect of such cost sharing measures. By the nature of the plans, it had been suggested that users of HDPs would decrease health care expenditures. Although evidence was not found that increasing cost sharing was a useful method to increase cost consciousness in health care, Gupta and Polsky did recognize that some of the limitations could be due to users being ignorant of plan information and all aspects of coverage (Gupta & Polsky, 2012). The Waters et al. (2011) study suggested HDP enrollment was associated with decreased emergency room use, increased prescription drug use, decreased PCP use and increased specialty visits, although these findings were not significant.

The Uninsured

The uninsured population remained a considerable concern of the healthcare market and policymakers as most uninsured struggled to pay for medical care expenses without experiencing a financial hardship (Hamel et al., 2018). From 1997-2013, the number of uninsured individuals grew and then began to decrease in 2013 (20.4%) and 2016 (12.4%) (Cohen, Zammitti, & Martinez, 2017). According to the 2016 National Center for Health Statistics' health insurance

coverage survey release, the percentage of uninsured decreased to nine percent from 2010; this nine percent represented no change from 2015 survey findings (Cohen et al., 2017).

With the ACA provisions, insurance coverage for young adults ages 19-25 improved and the trend of uninsured percentage decreased. In 2010, young adults gained insurance options under the expansion provisions of the ACA (McMorrow, Kenney, Long, & Anderson, 2015). Many studies have demonstrated the ACA dependent coverage expansion (provision allowance for a dependent child to remain on the parent or guardian's private insurance plan until age 26) effectively reduced the uninsured in young adults ages 19-25 by the conclusion of 2011 (McMorrow et al., 2015). Of note, the 2010 ACA dependent coverage expansion provision reduced the uninsured rate among higher-income young adults who had the option of extending parental private coverage by a disproportionate rate (McMorrow et al., 2015). From 2010 to 2013, those young adults in the moderate-income category reduced their uninsured rate by 10.6% (from 37% to 26.4%) and high-income young adults dropped 15.7% to 6.1% (McMorrow et al., 2015). The increased rate of coverage in the higher and moderate-income categories resulted mainly from increases in private coverage, possibly attributed to the expansion of dependent coverage and economic recovery (McMorrow et al., 2015).

Additional ACA expansion provisions increased access to affordable health insurance in 2014 through measures such as Medicaid expansion and federal subsidization for state and federal Marketplace coverage purchases (McMorrow et al., 2015). The 2014 ACA provision was associated with reductions in the uninsured rates in the low and moderate income 19-25-year-old age group (McMorrow et al., 2015). McMorrow et al. (2015) further found that the rate of uninsured in the 19-25 age range dropped from 30% in 2009 to 19% in 2014.

From 2010 to 2017, 19.3 million fewer people of all ages were uninsured, with 2017 showing just 9.1% were uninsured (Cohen et al., 2018). This demonstrated no significant changes from 2016 but did represent a decrease of 19.3 million uninsured individuals from the 2010 reports (Cohen et al., 2018). Regarding individuals ages 18-64 specifically in 2016, 12.4% were uninsured, 20.0% had public coverage, and 69.2% had private health insurance coverage; (study noted small number of individuals were represented in more than one category) (Cohen et al., 2017). Of those 136.4 million individuals covered by private health insurance plans in 2016, 9.4 million (4.7%) obtained coverage through the Health Insurance Marketplace (Cohen et al., 2017). As of 2016, 27.6 million Americans remained uninsured (KFF, 2018a). The non-elderly adult rate of uninsured dropped 8.4 percentage points from 20.6% in 2013 to 12.2% in 2016, representing a decline of 41% (KFF, 2018a). Of the adults that remained uninsured, 45% cited the high costs as the most common reason (KFF, 2018a). For adults ages 18-64 in 2017, 12.8% were uninsured, 19.3% were covered under public insurance and 69.3% were covered under private insurance (study noted small number of individuals were represented in more than one category) (Cohen et al., 2018). Cohen et al. (2018) reported 14.0% of adults ages 18-25 were uninsured in 2017.

Premiums Trends

In 2016, family premiums for employer sponsored health plans increased by 3% and at a rate greater than employee wages (2.5%) and inflation (1.1%); employees contributed approximately \$5,267 annually towards family premiums (Palosky & Ducat, 2016). This modest increase demonstrated a slowing in family premium increases (Palosky & Ducat, 2016). Although rates of growth slowed, premium costs continued to increase. This may have been in part due to the increased cost sharing that employees (the patients) were paying. It may also

have resulted in part due to the increased enrollment in HDPs with HSAs by employees (Palosky & Ducat, 2016). In the time frame these trends were identified, the ACA provision of employers with greater than 50 employees to offer health benefit was in full effect (Palosky & Ducat, 2016).

Annual family premiums for employer sponsored health plans experienced an average 3% increase in 2017 to \$18,764 (employee wages (2.3%) and inflation (2%) exhibited similar increases during this same time frame) (KFF, 2017b). The employee contribution rate for family premiums experienced a greater increase than the employer contribution rate (KFF, 2017b). Employer premiums experienced a 3% increase, while the ACA marketplace experienced a 20% increase, implying the employer market was more stable (KFF, 2017b). For single coverage, the average annual premium contribution was \$1,213, with family coverage contributions ranging from \$6,814 (smaller employers) to \$5,264 (larger employers) (KFF, 2017b). In the 2017 survey, most of the large firms surveyed that offered health benefits also offered supplemental coverage benefits (such as dental, vision, and long-term care) separate from other health coverage; large employers were more likely to offer such benefits than smaller employers (KFF, 2017b).

Employers were found utilizing strategies to reduce enrollment in their own companies' health plans. These strategies included numerous interventions expected to result in less cost to the employer and expected to pass additional out of pocket costs on to the employee (Palosky & Ducat, 2016). In cases where the spouse of an employee had the option of coverage through another source, no coverage was offered through the employer (Palosky & Ducat, 2016). When an employee took advantage of coverage offered through a spouse, 10% of firms provided additional compensation to the employee who enrolled in the spouse's employer's plan (Palosky & Ducat, 2016). Businesses elected to contribute the same amount towards premium for both

single and family enrollment; any employee who elected to enroll dependents assumed the full cost for these additional enrollees (Palosky & Ducat, 2016). Businesses offered financial incentives to encourage workers to complete health risk assessments and demonstrate improvements through biometrics (Palosky & Ducat, 2016).

Trends in Out of pocket Costs

Health care costs in the United States continued to be a concern, affecting citizens in varying degrees; being insured, while providing financial protection, was not a definitive solution as insured individuals also reported facing challenges of medical expense payments (Hamel et al., 2016). Patients assumed an increased portion of the financial responsibility for their medical care; patient payments became the third largest source of provider revenue at 35%, still trailing Medicare and Medicaid provider revenue (Evans & Fleming, 2018). As a result of increased fiscal responsibility, many Americans had challenges affording healthcare (Evans & Fleming, 2018). Twenty-six percent of U.S. adults in the 18-64 age range reported issues paying medical bills within the last year (Hamel et al., 2016).

Insurance status did not relieve concerns with paying medical bills; sixty-two percent of those that reported issues paying medical bills were covered by health insurance whereas 34% stated the person was uninsured (Hamel et al., 2016). The cost of health care was equally daunting regardless of insurance status (Claxton, Sawyer, & Cox, 2018). The uninsured are less likely to receive preventative care and chronic disease care (KFF, 2018a). Of the non-elderly uninsured, 20% went without care because of cost; this was greater than the 3% who had access through private coverage and the 8% who were under public coverage (KFF, 2018a). Non-elderly uninsured individuals encountered greater difficulty in paying for medical expenses (29%) than those who had insurance (14%) (KFF, 2018a). Hospitals charged uninsured patients

at rates larger than those charged to individuals covered by private or public health plans/programs (KFF, 2018a). For uninsured individuals ages 18-64, 53% faced challenges paying household medical bills within the past year and approximately 20% of insured individuals ages 18-64 years of age also indicated facing these same challenges (Hamel et al., 2016). Of those individuals ages 18-64 years of age covered under private insurance, those with high deductible plans were more likely to have problems covering medical bills (Hamel et al., 2016). Adults under the age of 30 were more likely to have issues paying medical expenses than the 30-64 aged group (Hamel et al., 2016). Of all individuals reporting issues paying medical bills, 66% cited a one-time or short-term medical expense resulted in the financial challenge whereas 33% cited bills relating to chronic care over time. The most common services resulting in issues paying medical bills included emergency room visits (21%), hospitalizations (20%), dental care (12%), and diagnostic testing (11%) (Hamel et al., 2016).

Insurance plan provisions and policies (such as cost sharing, networks, and unclear and complicated billing practices) can lend to issues of affordability and access (Hamel et al., 2016). While most Americans do not report barriers to healthcare due to cost, 9% of adults reported delaying or forgoing medical care because of the cost (Claxton et al., 2018). For those insured, 75% indicated the cost sharing measures exceeded what they could afford at the time the medical expenses occurred; these measures were not limited to deductibles but may have also represented repeated co-pays or out-of-network or coinsurance costs (Hamel et al., 2016). Three out of 10 of those insured with concerns paying medical bills received care from an out-of-network provider that their insurance excluded (Hamel et al., 2016). Increased costs from out-of-network providers were often a surprise, with 69% stating they were not aware at the time of service their insurance would not cover the services (Hamel et al., 2016).

From 2005 to 2015, those insured under employer sponsored plans experienced an out of pocket cost growth of 66%, which was greater than the average health plan payment growth per enrollee of 56%; wages rose 31% during this same time frame (“Payments for Cost Sharing”, 2017). The workers average out of pocket cost increased \$309 from 2005-2015 while average payment by health plan rose \$1,631 (KFF, 2017a). As employers utilized strategies to reduce their premiums costs, those costs were passed to the employee. Since 2010, deductibles experienced a 67% increase, rising almost three times as fast as premiums (Palosky & Ducat, 2015). The increase in deductibles resulted from the combination of more employees having deductibles and the increased size of the cost sharing measure (Palosky & Ducat, 2015). This rate of deductible increase outpaced the rise in single premiums (24%), workers’ wages (10%), and general inflation (9%) (Palosky & Ducat, 2015). Employee paid portions of premiums saw increases greater than that of the employer contribution rate as well (KFF, 2017b).

Health Care Spending Trends

A section of the Department of Health and Human Services, the Center for Medicare and Medicaid Services provided data through the National Health Expenditure Accounts (NHEA) (CMS, 2018). As the official estimate of total health care spending in the United States annually, it included measures of U.S. expenditures for health care goods and services, public health activities, government administration, the net cost of health insurance, and investment related to health care (CMS, 2018).

In 2010, total personal health care spending (all goods and serviced used to treat or prevent a condition in a specific person) reached \$2.2 Trillion or \$7,097 per person (Lassman, Hartman, Washington, Andrews, & Caitlin, 2014). From 2002-2010 the average annual spending growth was 4.5% for working adults (age range of 19-44 years) (Lassman et al., 2014).

Adults age 19-44 accounted for 61% of the US population and 52% of personal health care spending in 2002; in 2010, this same age group represented 62% of US population and accounted for 53% of personal healthcare spending in 2010 (Lassman et al., 2014). Consumption of personal care services and goods in the 19-44 age population was financed mostly by private insurance, representing 47% of total spending in 2010 (Lassman et al., 2014).

In the past decade, economic conditions and the effects of the ACA on the rate of insured Americans influenced the health sector, resulting more recently in slowed spending and enrollment growth rates after the ACA expansion's effects were realized (Hartman, Martin, Espinosa, Catlin & National Health Expenditure Accounts Team, 2018). From 2008-2013, the rate of spending on health care experienced historically low increases averaging 3.8 % per year (Hartman et al., 2018). National health spending was projected to grow faster than the rate experienced from 2008-2016 of 4.2% and at an average rate of 5.5% per year for 2017-26, reaching \$5.7 trillion by 2026 under the current law (CMS, 2018). National Health Expenditures (NHEs) were expected to increase 1% point faster than the Gross Domestic Product (GDP) from 2017-2026, with the health share of the GDP reaching 19.7% by 2026 (CMS, 2018).

Beginning in 2007, health coverage (insurance) and the use of health care services was affected by recession recovery, low inflation, legislative actions, and economy wide slowed growth in prices (Hartman et al, 2018). As the ACA effects were realized in 2014 with increased enrollment in health insurance and increased use of services, healthcare spending increased 5.1% in 2014 and 5.8% in 2015 (Hartman et al., 2018). In 2016, health care spending accounted for 17.9% of the GDP (CMS, 2018). This demonstrated a healthcare level of spending increase of 4.3% above the spending level in 2015 and represented a growth of 3.3 trillion or \$10,348 per person in 2016 (CMS, 2018; Hartman, et al., 2018). Among all categories of health consumption

expenditures, the only increased growth was seen in the dental services expenditures from 2015 to 2016; all other categories demonstrated decreased in growth rates in 2016 (Hartman et al., 2018).

Growth in healthcare spending could be attributed to medical price increases, changing demographics of the population, and growth in use and intensity of medical services and goods (Hartman, et al., 2018). Private health insurance spending accounted for 34% of all health care spending in 2016, increasing 5.1% to \$1,123.4 billion (CMS, 2018; Hartman, et al., 2018).

Private insurance remained the largest payer for health goods and services covering over 60% of the U.S. population in 2016 (Hartman, et al., 2018). Spending on physician and clinic services increased faster than spending on all other health care services, reaching \$664.9 billion in 2016 (Hartman, et al., 2018). The use and intensity of physician and clinical services increased faster in 2016 than it did on average from 2007-2013 and accounted for 75% of the increase in physician and clinical service expenses.

Medical price growth experienced a slight increase in pace in 2016 of 1.4% from the 1.0% in 2015 and was attributed to faster economy wide pricing growth as measured by the GDP price index (Hartman, et al., 2018). Medical specific price inflation in 2016 was low (increase of 0.1%), with almost no increases experienced in 2014-2015 (Hartman, et al., 2018). Medical services and durable medical equipment saw more rapid pricing increases than retail prescription drugs and nondurable medical goods (Hartman, et al., 2018).

In 2016, out of pocket spending increased 3.9% to \$352.2 billion or 11% of all healthcare spending (CMS, 2018). Household spending for healthcare (which includes insurance premiums, contribution to government plans through payroll taxes and premium payment, and

out of pocket spending) accounted for one of the largest shares of the overall healthcare spending in 2016 at 28%; this has remained unchanged since 2014 (Hartman, et al., 2018).

Total healthcare spending portions were denoted as 28% by the federal government, 19.9% by private business, 16.9% by state and local governments, and 6.7% by other private revenues (Hartman et al., 2018). This represented a slower increase in government and household spending than in 2015, with more rapid growth in spending by private business and other private revenue sources than in 2015 (Hartman et al., 2018). Healthcare spending by household increased 5.0% in 2015 and 4.6% in 2016 (Hartman, et al., 2018). Out of pocket spending was the largest expense in household spending category at 38% (at 3.9% increase in 2016) (Hartman, et al., 2018). According to the NHE database, out of pocket spending experienced an increase of 3.2% from 2002-2012 for the 19-44 year age group with a 3.8% increase overall (CMS, 2017). Total personal health care per-capita spending for 19-44 year age group experienced slowed average annual growth from 2002-2004 (when it averaged at 6.9%) to 3.1% in 2010-2012; in dollar amounts, this change resulted in an increase of \$4,193 to \$6,632 (CMS, 2017). Out of pocket per-capita spending increased from \$665 in 2002 to \$842 in 2012; this represents average annual growth changes from 5.2% in 2002-2004 decreasing to 1.5% in 2010-2012 (CMS, 2017). Percentage of spending growth slowed; the dollar amount of out of pocket costs continued to climb.

Choices of Coverage for College Students

Many colleges and universities required students to participate in the college health insurance plan or provide proof of coverage under another insurance method (Braverman, 2018). Approximately 10% of students secured coverage under the school's sponsored plan (Braverman, 2018). The ACA allowed a college student to remain eligible under the parent or

guardian's policy until the age of 26 (Braverman, 2018). Advantages of this approach included lower costs (if the policy holder's employer shares the premium costs) and assistance in eroding the family deductible; negatives included limitations on out-of-network coverage which could have resulted in increased cost shares (Braverman, 2018). For some families, it was more cost effective to purchase a personal insurance plan for their student (Braverman, 2018). The college's plan could provide multiple benefits including bundling into the student's academic bills (possibly allowing for financial assistance in covering premium costs), increased in-network access and coverage for medical services local to the campus, and increased confidentiality for the student as bills, Explanation of Benefits (EOBs), etc. were sent to the student, not the parent or guardian (Braverman, 2018). A common drawback may have included limited coverage based on academic enrollment (coverage only provided during the academic terms the student was enrolled). Geographic relocation to attend college was considered a qualifying life event and allowed student to enroll in plans through the federal government exchange (Braverman, 2018).

The provision which removed penalties imposed by the ACA for Americans who did not have health insurance was repealed in December 2017 (Rosata, 2018). Some states have stepped in and imposed mandates regulating the determining of rates based on health status, gender, or age (Rosata, 2018). According to tracking completed by the Kaiser Family Foundation, the range of proposed rate increases were from 7-36% higher than in 2018 (Rosata, 2018). In December 2018, Judge Reed O'Conner of the Federal District Court in Fort Worth, Texas, indicated the mandate requiring health insurance cannot be sustained (Goodnough & Pear, 2018). Furthermore, as the justice declared the individual mandate unconstitutional, the other ACA provisions became invalid as the individual mandate could not be separated from the entire act

(Goodnough & Pear, 2018). With this ruling may come the removal of several expansion benefits, including the allowance for parents to cover adult children up to 26 years of age on their plans. As the enactment and updates to the ACA have affected the healthcare system and almost all Americans in some way, it was expected that the invalidation of the act would have the same breadth of effect (KFF, 2018b & Lee, 2018). An appeal to the December 2018 decision was expected and would follow the appropriate paths within the judicial branch to determine the future of the ACA and how Americans and healthcare would be affected (Goodnough & Pear, 2018).

Intercollegiate Athletics

In times of evolving economic uncertainty and increased focus on institutional finances, the athletic funding crisis led to continued concerns and called for greater understanding of the complexities and issues involved in athletic department funding (ASHE, 2015). Intercollegiate athletics began in student run campus organizations in the mid-1800s; today college athletics is an industry reporting billions in media rights contracts and sponsorships (ASHE, 2015). In the expanding business of college athletics, effective leadership recognizes the importance of gathering, evaluating, and using financial data to make responsible and informed budgeting decisions (Hodge & Tanlu, 2009). In most institutions of higher education, athletic spending exceeded athletic revenue with the number of profitable athletic departments being low in number (Brady et al., 2016). Most institutions were unable to meet their annual operating expenses without transfer of institutional funds, government sources, and student fees; according to the NCAA, those that were able to function self-sufficiently at that time were less than two dozen in number (Brady et al., 2016). Athletic departments worked to develop methods to

address the differences in revenues and expenses, using both traditional allocations/subsidy sources as well as prioritizing fundraising efforts (ASHE, 2015).

Critics attributed the low number of profitable programs to excessive spending and not an increase in costs (Hobson & Rich, 2015). The arms race in the cost of athletic facilities and coaching salaries continued to be cited as a major area of heightened spending (ASHE, 2015). High dollar coaching contracts, demands for better facilities, increasing staffs, and the increased scholarship commitments were acknowledged as the sources of rising athletic costs (Desrochers, 2013). While athletic costs rose, higher education institutions struggled to manage increasing cost in other areas of campuses while state budget support and endowments declined (Desrochers, 2013). Some institutions eliminated athletic teams as a method to begin answering the call for cost reductions (Desrochers, 2013). Electing to move into a less expensive level in football became an expense reduction method used at institutions such as Idaho which left the FBS for the less expensive FCS for 2018 (Schrotenboer, Berkowitz, & Schnaars, 2018). One sports economist pointed out that decision makers within these programs, unlike the traditional business model, had less incentive to reduce expenses in pursuit of profits as they spend ‘other people’s money’ (Schrotenboer et al., 2018). They experienced the pressures to stay competitive, keep up with league peers, and attract renowned, prestigious coaching staffs (Schrotenboer et al., 2018). Lastly, these same decision makers had limited tenure in their positions and often had left to pursue other jobs before the full effects of choices made were realized (Schrotenboer et al., 2018). If athletic and institutional budgets demonstrated similar rate increases, finances were sustainable, but if athletic spending growth outpaced institutional spending growth, greater institutional support was necessary (Burnsed, 2015).

Athletic Finance and Spending

From 2004-2014, FBS schools' median generated revenue increased by 83.2%, as expenses increased 114.6% during the same decade (Burnsed, 2014). The median athletic department deficit at the Division I level was 11.6 million in 2010, the same as in 2009 (Sander, 2011). In 2012, only 23 of the 228 Division I public institutions generated operating revenue through their activities greater than their operating expenditures, reaching the NCAA benchmark for self-sufficiency (Berkowitz, Upton, & Brady, 2013). Self-sufficiency under the NCAA existed when operating revenue generated through the institution's activities exceeded operating expenses (Berkowitz & Schnaars, 2017b). In 2013-2014, approximately 10% of Division I public institutions generated more operating revenue through their activities than operating expenditures, reaching the NCAA benchmark for self-sufficiency; this represented an increase by four institutions from the 2012-2013 figures (Brady, Berkowitz & Schnaars, 2015). In 2014, 25 of the 48 public Power Five institutions operated at a loss (Burnsed, 2015; Hobson & Rich, 2015). In 2016, 24 schools had an annual revenue more than \$100 million, an increase from 20 schools in 2015 and only 13 in 2014 (Gaines, 2015).

Two hundred thirty Division I public schools saw changes in trends in 2016, including increases in financial aid for student-athletes of almost nine percent (combination of tuition, room, board, and incidental spending increases), coaching compensation by a modest five percent (the smallest rate in over 10 years), support/administrative staff (experienced the lowest increase since 2010 at 4.7%), and travel, equipment, supplies, and game day operations (experienced their lowest growth rate since 2011) (Berkowitz & Schnaars, 2017a). Twenty-three public schools – all SEC, Big Ten, or Big 12- met the NCAA benchmark of fiscal self-sufficiency by the conclusion of the 2016 fiscal year (Berkowitz & Schnaars, 2017b). Of the 230

Division I schools reporting 2016-2017 finances, 62 had expenses that exceeded revenue, not considering those funds classified as total allocated (which are allocated funds representing the sum of student fees, institutional support, and state funds allocated to the athlete department minus certain funds that were transferred back to the institution) (USA Today Sports, 2017a; 2017b). Of those institutions within the Power Five conferences reporting, four ACC institutions (eight out of 15 ACC institutions reported), no Big 12 institutions (eight out of 10 institutions reported), three Big Ten institutions (13 out of 14 institutions reported), four Pac-12 institutions (10 out of 12 institutions reported) and one SEC institution (13 out of 14 institutions reported) reported expenses in excess of generated revenue in 2016-2017 (USA Today Sports, 2017b). Overall, the 2016-2017 NCAA finances, reported by USA Today, demonstrated an increasing number of Division I institution athletic departments were operating self-sufficiently with revenue equal to or exceeding expenses compared to previous years (USA Today Sports, 2017b). Those institutions that did not attained the self-sufficiency benchmark through revenue generation sought financial support from other sources.

With higher education economic trends resulting in greater decreases in state budgets and institutional endowments, the practices of athletic department subsidy and institutional transfer of funds to offset costs drew increasing attention and concern. The controversy between funding education and funding athletics increased. Even as collective revenue of the 108 public institutions in the FBS had increased approximately 50% since 2011 (attributed to television and media contracts), the deficit spending and subsidies also accelerated (Schrotenboer et al., 2018). Their combined revenues reached \$8.3 billion in 2017 (not adjusted for inflation); at this same time, 18 of these institutions spent the revenue and reported annual deficits of more than \$1 million for fiscal year 2017, compared to only seven in 2011 (Schrotenboer et al., 2018). In

2017, 12 FBS public schools used \$25 million or more in subsidies from student fees or university funds to balance their budgets, compared to only three in 2011 (Schrotenboer et al., 2018).

“The overwhelming majority of colleges and universities in the NCAA across all three divisions subsidize part or all of athletics” (Burnsed, 2015, para .6). In the 2008-2009 academic year, athletic departments at the 222 Division I public schools collected \$795 million from student fees as subsidy; that same 2008 year saw only 13 athletic programs generating revenue greater than their expenses (ASHE, 2015). Some viewed athletic department subsidies as a regressive fee, hitting the wealthier institutions less and the lower income students more (ASHE, 2015). Of note, the top five athletic program subsidy rates were in the four conferences with the highest rate of students on Pell Grant (Conference USA, Western Athletic Conference, Sun Belt, and Mid-American) (ASHE, 2015). Seven NCAA Division I public universities recorded in excess of \$100 million in athletic expenses during the 2011 school year (ASHE, 2015). These same seven schools received less than five percent subsidy from allocated sources and generated 28% of the annual expenses (ASHE, 2015). During this same time frame, a sample of four different Division I schools had less than five million dollars in expenses but had a minimum of 50% of their revenue attributed to allocated sources and generated two percent of their annual expenses (ASHE, 2015). The difference between these groups was not noteworthy but the percentage of expense covered by booster contributions was, especially considering the economic climate in higher education (ASHE, 2015). Outside the 65-high profile, large budget DI FBS schools known as the Power Five, schools’ athletic departments recognized the need of increasing athletic department revenue (Berkowitz& Schnaars, 2017a). In 2014, the same year 24 FBS institutions had revenue generations greater that operating expenses, the median FBS

institution spent \$14.7 million in subsidized to athletic departments; this demonstrated an increase from the greater than \$11 million in subsidies in 2013 to FBS athletic departments (Burnsed, 2015). This subsidy trend was not limited to the FBS schools; the median Football Championship Subdivision (FCS) and non-football schools use approximately \$11 million to help fund athletics in 2014 (Burnsed, 2015). While subsidy increased in 2014, the median spending increase was a modest two percent from 2013; a decade prior, the athletic department subsidies were increasing approximately five percent faster than overall institutional spending annually (Burnsed, 2015).

The autonomy granted the five wealthiest conferences in NCAA DI FBS known as the Power Five was cited as another culprit in the increased attention and spending on student-athlete benefits. But even members of the elite group of 65 were reconsidering spending habits and made changes in spending; examples included changes in travel including less staff, travel planning resulting in less time away from campus, and limiting the number of institutionally sponsored teams to the minimum required 16 (Wolverton, 2015). The possibility of reducing the number of sports in efforts to reduce expenditures was a real possibility. In offense to this approach, coaches of lower profile teams joined forces to voice concern, and, at some institutions, student-athletes may be consulted (e.g. Iowa State) (Wolverton, 2015). As institutions sought ways to address the seemingly necessary increase in spending, there was an increased desire to explore and develop new streams of revenue; this may have included appeals to NCAA to allow more creative licenses to develop new financing methodologies (Wolverton, 2015).

Fall 2014 saw a new era in the NCAA for these schools: the autonomy to submit their own legislation for implementation beginning in 2015 (Burnsed, 2014). Of note, leagues outside

these Power Five, autonomy conferences may choose to adopt these rules, but the resource imbalance made the measure unlikely (Burnsed, 2014). In 2015-2016, some NCAA schools began to experience an increase in student-athlete benefits that had yet to be seen. The University of Arkansas, for example, increased expenses approximately \$1 million by implementing a benefit allowing coverage for full cost of attendance (Berkowitz & Schnaars, 2017a). Full cost of attendance allowance was projected to add more than \$1 million to annual budgets, laxity in rules on student-athlete meal spending resulted in dramatic increases in nutritional related budgets, and potential increases in assistance through medical and health related programming for current and former student-athletes were likely to result in increased expenses under student-athlete benefits (Wolverton, 2015).

In early 2015, Division I schools passed NCAA legislation that allowed institutions to cover full cost of attendance; this amount varied among campuses and went beyond tuition, fees, books, room and board, and extended into academic related supplies and travel/transportation expenses (Brutlag Hosick, 2015). In 2015, NCAA Division I legislation saw decreased regulation regarding providing meals to student-athletes (“Meals Deregulation”, 2015). The impacts of these allowances began to be seen on campuses not only in provisions and services but facilities.

For example, at the University of Arkansas, \$7 million was invested in a new sports nutrition center in addition to the \$1.5 million Arkansas spent on meals and snacks for athletes (which were not allowed before April 2014), and more than \$20.7 million on capital projects (Berkowitz & Schnaars, 2017a). After these additional costs, Arkansas ended the fiscal year ahead by more than \$19.3 million, \$2.3 million more than the surplus experiences in 2014-2015, and in compliance with the NCAA fiscal benchmark (Berkowitz & Schnaars, 2017a). And

Arkansas reached the fiscal benchmark without institutional general fund transfers or student fees (Berkowitz & Schnaars, 2017a). Because of the decision by the autonomy conferences, athletic departments were expected to begin covering full cost of attendance in Fall 2015 (Wolverton & Kambhampati, 2015).

When federal ruling prevented NCAA from “capping” athletic scholarships below full cost of attendance, universities had to take a fresh look at the methods of calculating the cost of attendance (Wolverton & Kambhampati, 2015). These estimates of cost were submitted to the federal government (Wolverton & Kambhampati, 2015). In response to this implementation, institutions were evaluating and reevaluating the methodologies used in calculating these figures as well as calling for standardization in calculation methodology across institutions (Wolverton & Kambhampati, 2015). In some cases, student health insurance was cited as causing inflation to these estimated costs (Wolverton & Kambhampati, 2015). In others, travel expenses were cited as the reason for increases in these figures (Wolverton & Kambhampati, 2015). Higher cost of attendance was potentially beneficial to athletics in that it allowed for more student-athlete funding but was viewed as potentially negative to the overall institution, as it increased the reported cost for the average student to attend (Wolverton & Kambhampati, 2015). As new benefits were available to student-athletes with changes in some NCAA regulations and rules, budgetary impacts were causing athletic departments to determine strategies to cover these increased costs. Although institutions were to independently evaluate finances and had the discretion to determine their best financial practices, some looked for collective efforts to standardize benefit implementation (Wolken, 2014).

Medical Injury Care for Student-Athletes and Expenses

When athletically related medical expenses are incurred in covered events, the methods of management can vary among institution. If an institution practices self-insurance and requires the student -athlete have personal primary insurance, the personal primary insurance is billed first, and the remaining balances are remitted to the institution (Killinger & Schellhase, 2018). In cases of institutional self-insurance, the institution assumes full responsibility for the medical expenses whereas when an institution purchases secondary insurance, the remaining balances are then bill to the institution's policy (Killinger & Schellhase, 2018). In order to ensure student-athletes do not experience financial burdens from athletic related medical expenses, NCAA member institutions are responsible for ensuring a student athlete has insurance coverage (Killinger & Schellhase, 2018). Concern has been voiced about possible gaps in coverage for a student-athlete injured during participation and the lack of transparency of policies in how medical care and expenses are managed within athletic departments (Solomon, 2012). To address this potential coverage gap for intercollegiate athletic injures and in attempts to mitigate the costs felt by athletic department budgets, institutions may have chosen to seek other sources of coverage for athletic injuries, but the institutional cost could have been substantial. For example, as of 2010, West Virginia's secondary policy cost the university \$250,000 annually (Fain, 2010). For the NCAA, as well as the institutions that constituted its membership, the discussions regarding responsibilities to the student-athlete and student-athlete benefits touched on the issues of injuries, medical care, and insurance (Yahn, 2014). The management of medical care expenses and insurance for student-athletes was an evolving, complex responsibility with multiple possible issues, concerns, and intricacies of management (NCAA, 2018a). The NCAA

implemented rules, regulations, and recommendations regarding insurance for and medical coverage of student-athletes (NCAA, 2018a).

The NCAA initiated the catastrophic injury insurance program providing member institutions a supplement for the required athletic injury coverage requirement. NCAA bylaws required student-athletes have coverage under an insurance policy for injuries related to athletics (Burnsed, 2016). Specially, NCAA Bylaw 3.2.4.8 stipulates members institutions must ensure insurance coverage for medical expenses a student-athlete sustains participating in a covered event (NCAA, 2017). This coverage could be under the student-athlete's parents' or guardians' policy, the student-athlete's individual policy, or the institution's coverage and was required up to the NCAA deductible of the catastrophic injury insurance program of \$90,000 (McCune, 2013; NCAA, 2017b; Soloman, 2012). Claims may be filed against the NCAA's catastrophic policy for a serious injury that may result in disability or when the expenses of a covered event exceeded the policy deductible (NCAA, 2018b). A secondary insurance policy is purchased by most institutions for student-athlete coverage (Killinger & Schellhase, 2018). Through this process, the NCAA catastrophic deductible would be satisfied by institutional practices and the student-athlete would not assume any out of pocket costs (NCAA, 2018b).

Since 2005, member institutions were required by NCAA By-Law 3.2.4.8 to certify a student-athlete had insurance coverage for athletically related injuries sustained while participating in covered events (NCAA, 2017b). Athletic related injuries were further defined as those "injuries that are a direct result of participating in a covered event" (NCAA, 2017b). Covered events as defined by NCAA bylaw 3.2.4.8.3 and therefore eligible under the NCAA program, applied to

(Adopted: 4/28/05 effective 8/1/05) (a) Any intercollegiate sports activity, including team travel, competition, practices and conditioning sessions during the playing season (as defined in Bylaw 17.1.1);(b) An NCAA-sanctioned competition in which the insured person is an official competitor; or (c) Practice and conditioning sessions that are authorized, organized or directly supervised by athletics department personnel at the member institution other than during the playing season. Such sessions must occur on campus or at approved off-campus facilities as part of an intercollegiate athletics activity. For insured student-athletes or prospective student-athletes who compete in individual sports, off-campus intercollegiate athletics activities must be authorized by athletics department personnel at the participating school and take place at approved locations. (NCAA, 2017b, pp 10-11)

Institutions have various methodologies used to satisfy the NCAA insurance requirement ranging from self-insurance to private policies with various insurance plans, deductible, and premium options (Yahn, 2014).

Institutions electing to purchase a basic medical accident policy to serve as secondary insurance coverage were facing financial challenges while attempting to reduce the risk of institutional financial loss (Yahn, 2014). However, these policies were used to reduce or avoid out of pocket costs to the institution and provide coverage for athletic injuries and illnesses; no coverage was provided through these measures for non-athletic injuries and illnesses or other non-covered medical conditions (Yahn, 2014). The cost associated with the commercial secondary basic accident policies were to be evaluated with the institutional needs and abilities in mind and factored into the institutional plan. In 2014, the South Dakota Board of Regents was faced with the challenges of providing secondary insurance coverage to six state public

universities and the costs (Yahn, 2014). The premium, which was \$618,460 in 2013, was projected to be almost \$1.4 million in 2014 for the same policy (Yahn, 2014). Discussions included raising the deductible in attempts to reduce the premium costs; the change was projected to lower the premium for the secondary policy to under \$1 million for the student-athletes at these six institutions (Yahn, 2014).

NCAA Bylaw 16.4 states “An institution, conference or the NCAA may provide medical and related expenses and services to a student-athlete” (NCAA, 2017b, p 224). The Atlantic Coast Conference, Big Ten Conference, Big 12 Conference, Pac-12 Conference, and Southeastern Conference member institutions were granted autonomy in several areas in 2014 by the NCAA, including the areas of insurance and medical expenses. Areas specifically included

“legislation related to student-athletes securing loans to purchase career-related insurance products (e.g., disability, loss-of-value)”, “institutions providing insurance-related expenses for student-athletes” and “legislation related to the health and wellness of student-athletes, including insurance and other items to permit appropriate and sufficient care” (NCAA, 2017b, p. 33-34).

In October of 2017, the Big Ten and Big 12 conferences proposed amendment 2017-104, a proposal to amend Bylaw 16.4 on the topic of medical expenses for the autonomy conferences. Adopted in January 2018 to become effective August 2018, this amendment intended to establish standards institutions must meet in caring for athletic injuries for student-athletes. Furthermore, this adoption established the standard of care extension to two years past graduation or separation from the institution, or until the student-athlete qualified for coverage under the NCAA Catastrophic Injury Insurance Program, whichever occurred first. This extension of care went beyond medical coverage into such areas as mental health benefits (Marot, 2018). This

amendment further ensured that institutions had the discretion to determine the methods of providing medical care, the methodology of determining which injuries were athletic related, and the policies each institution deemed necessary to administer the medical care provision (Marot, 2018).

In recognition of the complexity and multifaceted nature of managing medical expense for intercollegiate student-athletes, in May 2018 the NCAA published on its organizational website “Effective Practices for Managing Student-Athlete Insurance” (NCAA, 2018a). In this document, acknowledgements were made as to the complicated nature of managing insurance for student-athletes (NCAA, 2018a). Recommendations were for development of a risk management team allowing professionals from varying backgrounds to collaborate on management of not only policies but expenses related to athletic injuries at member institutions (NCAA, 2018a). Policy establishment included the understanding and use of primary health insurance in controlling athletic injury costs, maximizing the student-athlete’s primary health insurance benefit as an effective method in controlling costs, and several recommendations on understanding how to access maximum benefits available were made. (NCAA, 2018a). Recommended measures also included the verification of student-athletes’ policies as active as well as the limits and terms of benefits available under these policies. Tracking of health care related spending and the impact of institutional policy and discount management strategies on spending were recommended (NCAA, 2018a). It was recommended to understand what costs represented not only in relationships with medical providers but in developing and managing potential discount options with medical providers and facilities (NCAA, 2018a).

In August 2018, the Power Five conferences adopted provisions amending NCAA Bylaw 16.4 on medical expenses and coverage; beyond the provision of medical coverage for athletic

injuries sustained during participation in the institution's athletic programs, this amended bylaw extended that coverage for two full years past participation. Each institution had the freedom to develop and implement applicable plans and policies that addressed this requirement. It remained within the discretion of each institution as to how care was provided; once the NCAA catastrophic deductible was met, the school was relieved of the requirement and expenses fell under the NCAA policy (Brutlag Hosick, 2018). Those institutions without the financial resources may have found related costs prohibitive without assistance or possible support from the NCAA (Marot, 2018).

In spring of 2016, the NCAA surveyed Division I head athletic trainers on their institutions' insurance coverage for student-athletes and its management, and the findings indicated many institutions at this level were exceeding the NCAA's minimum legislated requirements. With 232 responses, the data represented 70% of all Division I institutions (Burnsed, 2016). Management of insurance programs for student-athletes primarily occurred within the athletic departments at 93% ("NCAA Division I", 2016). The personnel most commonly managing these insurance programs were members of the athletic training staff at 77% (NCAA, 2016). Sixty-eight percent of institutions indicated requiring primary insurance and 70% of institutions provided primary insurance for a student-athlete who did not have primary coverage (NCAA, 2016). When asked by what method the institutions ensured coverage for athletic injuries up to the deductible for the NCAA catastrophic injury insurance program, the most commonly selected method was purchase of an accident policy at 67%; other methods included formal self-insurance programming (23%), requirement for the student-athlete to provide their own coverage (six percent), and having an alternate financial arrangement for coverage (four percent) (NCAA, 2016). Of those Division I institutions electing to purchase

accident insurance policies, aggregate plans represented 47% and fully insured represented 43% of plans purchased (NCAA, 2016). Only six percent of the institutions required the student-athlete to provide their own coverage, and 70% of the institutions indicated they would provide coverage in the absence of the student-athlete having their own coverage (Burnsed, 2016). When institutions required the student-athletes provide their own coverage as a condition of participation, 62% had processes in place to verify that coverage (NCAA, 2016). Even when primary insurance was not available, 84% of the responding institutions indicated the athletic department would cover 100% of costs for applicable medical expenses for athletic related injuries (Burnsed, 2016; NCAA, 2016). When considering medical expenses related to an illness, 44% of institutions did not provide coverage for these expenses (Burnsed, 2016). Of those institutions covering non-athletic medical expenses, 56% covered prescription medications, 56% covered eye care, 54% covered mental health services, 53% covered “standard primary medical treatments (e.g. physician, hospital, radiology, labs), 52% covered dental, and 40% covered musculoskeletal/orthopedic rehabilitation (NCAA, 2016).

In regard to costs for athletic injuries incurred during tenure as a student-athlete, 31% stated they did provide coverage after the athlete separated from the institution; and another 43% continued to cover these costs under certain conditions (NCAA, 2016). For those that did provide coverage after the student-athlete leaves the school or exhausts eligibility, there was variation in determining how to cover these expenses (NCAA, 2016). When asked if the institution would cover the expenses for non-referred or unauthorized services, 90% said their institution would not (NCAA, 2016). While demonstrating Division I institutions were proactive in managing insurance programs and expenses, Jim Phillips, who served as chair of the Division I council at the time of the survey, indicated more work was needed in this area to

ensure that student-athletes were provided appropriate levels of care (Burnsed, 2016). Phillips stated “graduation does not end the relationship with, nor responsibility to, our student-athletes. This topic, and other well-being issues, will be deliberated at the highest levels of college athletics as we work toward a better- and more appropriate- destination” (Burnsed, 2016).

In 2018, a study investigating the management medical claims coordination for athletic departments at NCAA DI, DII, and DIII member institutions was concluded. The data revealed a certified athletic trainer was responsible for coordination of medical claims at 62% of responding institutions (Killinger & Schellhase, 2018). Of these athletic trainers managing medical claims, 62.1% had no formal training in the role of medical claims management (Killinger & Schellhase, 2018). Secondary insurance policies were purchased by 93% of responding institutions in this study (Killinger & Schellhase, 2018). Only 21.3% of participating institutions reported the institution did not require student-athletes to have a personal primary insurance; 71.3% required the student-athlete to have primary insurance coverage and 7.2% provided this primary insurance coverage in cases of proven financial need (Killinger & Schellhase, 2018). Of these 199 institutions, 7.1% consider themselves self-insured (Killinger & Schellhase, 2018).

Institutional policy on primary insurance requirements was described as the most effective way to control expenses; yet the simple existence of any insurance policy for an individual student-athlete did not guarantee benefits applicable to athletic injury (NCAA, 2018a). Although institutional policy may vary in financial responsibilities for athletic injuries, the active student-athlete primary health insurance can reduce the balance falling to the institution (NCAA, 2018a). Institutions were recommended, as part of their primary insurance requirement policy management, to determine and communicate the acceptable insurance plan criteria to be eligible for participation as a student athlete at the institution (NCAA, 2018a). When a student-athlete

had an individual policy available (personal or from a parent/guardian), the athletic department sought to control the costs assumed by the institution by maximizing the student-athlete's individual policy benefit (NCAA, 2018a). It was recommended the in-network vs. out-of-network benefits variance be understood and considered in managing athletic injury cases for the institution (NCAA, 2018a). For example, institutions may be removed from the policy holder's (i.e. parent or guardian's) geographic location and therefore the insured (in this case the student-athlete) may experience coverage exclusions or decreased benefits based on campus geographic location (including subsequent reduced access to the in-network providers). A student-athlete's medical care costs could be reduced if the student-athlete used a medical provider within the plan's network. To access in-network benefits, procedures and care may have to be referred away from the institution (to the in-network area and providers) and the institutional medical staff's ability to direct and provide care would be reduced. Therefore, a financial gain (or reduction of financial loss) may come with an accompanying loss of medical care management and subsequent loss of recovery management influence. Prudent sports medicine professionals, along with athletic departments, were advised to develop a network of medical professionals and facilities that would provide the level of care required with consideration to convenience and cost effectiveness (NCAA, 2018a). Therefore, the loss of management and influence by the institution's medical staff could be one the student-athlete deems unacceptable and may choose to forfeit the plan's benefits for the choice and control of procedure management and medical care the institution can provide. By doing so, the institution may assume a larger share, or all, of the fiscal responsibility for medical care with athletic injury.

An approach becoming more common nationwide in health care was the application of fixed pricing (also known as direct pay or concierge care). Through this method, the cost of a

procedure or service was published and fixed, and it was all inclusive and definitive. If the care provided exceeded that published amount, the patient remained responsible only for the published fixed price; the facility or provider assumed any additional cost of providing care and retained any excess funds if care ended up costing less than the published amount (Edwards, 2017). This model was being driven by companies that were self-funded or self-insured (Edwards, 2017). As these companies paid out of pocket for the employees' medical care, fiscal responsibility required seeking less expensive options (Edwards, 2017). One state public employee insurance fund recently investigated how such an approach would impact their expenses (Edwards, 2017). Through that evaluation, it was determined that the choice be left to the insured (patient) (Edwards, 2017). The implemented rule required those choosing traditional hospitals to pay their cost sharing measures in copays and deductibles; if this same patient elected to have care at a direct pay facility, the patient paid no out of pocket costs (Edwards, 2017).

Chapter III: Methods

The purpose of this study was to identify, evaluate, and compare the expenditures, policies, and strategies associated with the management of medical care expenses for student-athletes among institutions of higher education as members of the Power Five conferences. This study aimed to identify the approximate costs applied to athletic institutional budgets for the medical care of student-athletes in intercollegiate athletics. This study also aimed to identify what policies and strategies institutions implemented regarding medical expenses and insurance. This study further aimed to determine if relationships existed among policies and strategies employed by an institution and the institution's medical care expenditures.

Chapter 3 details the research methods used to address the study purpose. This chapter details the purpose and design, population and sample, the instrumentation, and data collection procedures and analysis.

Research Questions

The following research questions were examined in this study:

- RQ1: What are the annual costs of medical care expenses for student-athletes in intercollegiate athletics?
- RQ2: What costs are institutions covering for medical care of student-athletes?
- RQ3: What are the policies utilized by institutions of higher education in the management of medical care expenses? What effect do policies have on medical expenses (if any)?
- RQ4: What are the medical expenses coordination and management strategies utilized by institutions of higher education in the management of medical care expenses? What effect do strategies have on medical expenses (if any)?

Participants

The population for this study consisted of institutions with membership to the Power Five conferences. Participants solicited on behalf of the institution were employed within NCAA Division I institutions which were members of the Power Five conferences. Potential participants were identified as serving in the role of Director of Sports Medicine/Head Athletic Trainer at a NCAA Division I Football Bowl Subdivision (FBS) institution belonging to the Atlantic Coast Conference (ACC) including Notre Dame, the Big Ten Conference, the Big 12 Conference, the Pac-12 Conference, or the Southeastern Conference (SEC). Institutional members of this designation make up five of the ten conferences in the FBS and were regarded as having the largest revenues and expenditures among Division I institutions at the time of this study. Purposeful sampling methodology was used, and participants were identified through institutional, conference, or professional websites as serving in the role of Director of Sports Medicine/Head Athletic Trainer. Those professionals serving in the role of Director of Sports Medicine/Head Athletic Trainer were recognized as leaders in their fields and had extensive experience in not only medical care of the student-athlete but were active in development and management of multi-faceted programs including, but not limited to, athletic policy, programing, and financing/budgeting. Professionals serving in this role were involved in managing and coordinating the medical care of all student-athletes within their respective institutions as well as development and recommendation of related policies to institutional administration based on current applicable markets.

Instrumentation

The instrument utilized for data collection was developed by the primary investigator. Market and industry professionals were consulted through instrument development who had

experience in fields of insurance, risk management, or management of medical care and/or expenses in college athletics. Through review of literature and consultation with professionals within the industries of athletic medicine and finance, risk management, and insurance, research questions were reviewed, themes were identified, and survey questions were developed. Survey items were related to research questions (Table 1).

Table 1

Research Question Mapping

Research Question	Variable	Survey Item
Demographic Questions		1-6: Conference 7: NCAA Division 8: # Teams 9: # Student-athletes
RQ1: What are the annual costs of medical care expenses for student-athletes in intercollegiate athletics?	Expenses/Costs	15: Overall 16: Athletic 17: Non-Athletic
RQ2: What costs are institutions covering for medical care of student-athletes?	Expenses/Costs	10, 11, 12, 13, 14
RQ3: What are the policies utilized by institutions of higher education in the management of medical care expenses? What effect do policies have on medical expenses (if any)?	Policy	18, 19, 20, 21, 22, 23, 24, 25, 26
RQ4: What are the medical expenses coordination and management strategies utilized by institutions of higher education in the management of medical care expenses? What effect do strategies have on medical expenses (if any)?	Strategy	27, 28, 29, 30, 31, 32, 33, 34

A draft of the survey was completed. The primary investigator consulted with faculty, sports medicine, athletic administration, risk management, and insurance market professionals to identify instrument problems, issues with the question-answering process, and other potential measurement errors. Each professional solicited to review the instrument had experience in applicable and related insurance markets, development of risk assessments and policies related to this niche of insurance in institutions of higher education, athletic administration (including finance), management practice for medical expenses in college athletics, and/or leadership roles within sports medicine departments at institutions of higher education. The primary investigator provided a copy of the survey instrument (Appendix A) along with a tool evaluation template

(Appendix B) to each reviewer; each reviewer provided feedback to the primary investigator. Professional reviews addressed problems within the instrument prior to implementation for data collection (including content and ease of use), examined the ability of the survey items to represent research questions, and reviewed content applicable to the research questions. Edits were made to the directions, organization and flow, terminology, and response options provided to participants to facilitate ease in completion of the survey (supporting participant response) and to reflect research questions. For example, modifications included adding options to selected responses and clarifying language or definitions used in survey questions. The final draft was loaded into Qualtrics. Display logic applications were utilized so that selected response prompted additional follow up questions or options as applicable.

Data Collection

Data collection occurred via online survey powered by Qualtrics during Spring 2018. The participant pool was defined by purposeful sampling method. The pool was restricted to personnel in the role of Director of Sports Medicine/Head Athletic Trainer as identified by institution, conference, or professional website. The email provided on the institution, conference, or professional website was used as the primary contact email for the purpose of recruitment. The potential participant was contacted by the principal investigator via email (Appendix C). Initial recruitment email was sent March 1, 2018 to all potential participants. The principal investigator described the study and provided a copy of the informational letter document (see Appendix D) for the potential participant to review and consider participation. Once the participant reviewed the informational document and acknowledged by initiating the survey, the participant's responses were recorded by survey software. Data collection occurred solely online. Follow up email invitations (Appendix E) were submitted to potential participants

during Spring 2018 in approximately three-week intervals or at any time at the request of a potential participant. Survey data collection was completed, and the responses were retrieved by the primary investigator and faculty adviser on May 16, 2018. Any incomplete or partial responses were removed, institutional coding was completed, and the key retained by faculty adviser.

Data Analysis

Once the survey concluded, the primary investigator removed institutional name and assigned a code. The key was secured in a password protected storage device with the faculty adviser in a separate electronic location from the survey response data. Access was available only to the faculty adviser. Once the coding system was in place, coded quantitative data were analyzed using SPSS Statistical Software. Descriptive statistics were used to describe medical expenses, policies, and strategies utilized by institutions. Descriptive approaches allowed the researcher to present data and summarize findings in an easy to interpret presentation format. The results were presented in aggregate form only. Findings are reported in chapter 4 of this dissertation.

Summary

This chapter reviewed the research design and procedures used to address the research questions. The purpose of this study was to identify, evaluate, and compare the expenditures, policies and strategies utilized by institutions of higher education in the management of medical care expenses for student-athletes within the Power Five conferences. This study examined those expenses as applied to institutional budgets only. This study aimed to identify the policies and strategies the institutions of higher education athletic departments use in attempts to mitigate and reduce expenses for student-athlete medical care. This study recruited participants employed

within the member institutions serving in the role of Director of Sports Medicine/Head Athletic Trainer to complete an online survey. The survey instrument was developed by the researcher, edited for content and format, and loaded into Qualtrics. All data collection occurred online. At the conclusion, data were extracted, coded, and analyzed using SPSS Statistical Software. Results were prepared and are presented in Chapter Four.

Chapter IV: Results

The purpose of this study was to identify, evaluate, and compare the expenditures, policies, and strategies associated with the management of medical care expenses for student-athletes among institutions of higher education as members of the Power Five conferences. This study aimed to identify the approximate costs applied to athletic institutional budgets for the medical care of student-athletes in intercollegiate athletics. This study also aimed to identify what policies and strategies institutions implemented regarding medical expenses and insurance. This study further aimed to determine if relationships existed among policies and strategies employed by an institution and the institution's medical care expenditures.

This chapter presents the summary of results obtained through data collection utilizing the survey instrument. Findings will be presented in table and narrative formats.

Research Questions

The following research questions were examined in this study:

- RQ1: What are the annual costs of medical care expenses for student-athletes in intercollegiate athletics?
- RQ2: What costs are institutions covering for medical care of student-athletes?
- RQ3: What are the policies utilized by institutions of higher education in the management of medical care expenses? What effect do policies have on medical expenses (if any)?
- RQ4: What are the medical expenses coordination and management strategies utilized by institutions of higher education in the management of medical care expenses? What effect do strategies have on medical expenses (if any)?

Participants

The population for this study consisted of institutions with membership to the Power Five conferences. Participants solicited on behalf of the institution served in the role of Director of Sports Medicine/Head Athletic Trainer within institutions which were members of the NCAA Division I FBS Power Five conferences from July 1, 2016 through June 30, 2017. Table 2 describes the number of sports and student-athletes by conference and as represented in the total sample. Of the 65 eligible institutions, 31 respondents participated in this study on behalf of the institution. These subjects represent a 47.7% response rate; Table 3 displays the response rate by conference.

Table 2

Summary of Number of Sports & Student-Athletes

	ACC		Big Ten		Big 12		Pac-12		SEC		Total	
	Sports	Number of Students	Sports	Number of Students	Sports	Number of Students	Sports	Number of Students	Sports	Number of Students	Sports	Number of Students
Avg.	20.83	529.17	24	741.33	17.4	514.4	21.2	556	19.4	537.78	20.23	574.68
Min.	17	400	19	507	14	450	17	450	19	375	14	375
Max.	27	700	31	930	20	600	30	900	21	650	31	930

Table 3

Summary of Survey Response Rate by Conference

Conference	Response Rate	Responses
Atlantic Coast Conference (ACC)	40%	6
Big Ten Conference (Big Ten)	42.9%	6
Big 12 Conference (Big 12)	50%	5
Pac-12 Conference (Pac-12)	41.7%	5
Southeastern Conference (SEC)	64.4%	9
Total	47.7%	31

Findings as Related to Research Questions

RQ1: What are the annual costs of medical care expenses for student-athletes in intercollegiate athletics? Table 4 presents the overall medical expenses applied to institutional budgets for responding institutions from July 1, 2016 through June 30, 2017. The data collected were further differentiated by conference and type of expense as athletic expenses (Table 5) and non-athletic expenses (Table 6). Seventeen out of 28 (60.7%) respondents indicated exceeding \$500,000 in overall medical expenses; by conference, the Pac-12 (100% respondents), SEC (77.8% respondents), and the Big Ten (60% respondents) all had over 50% of respondents which indicated exceeding \$500,000 in overall medical expenses. The Big Ten, Big 12, Pac-12 and SEC had all respondents indicating more than \$250,000 in overall medical expenses; the ACC was the sole conference with any respondent indicating annual overall expenses below \$250,000.

Table 4

Overall Medical Expenses

Conference	ACC (n=5) (N=6, 1 missing)	Big Ten (n=5) (N=6, 1 missing)	Big 12 (n=5) (N=5, 0 missing)	Pac 12 (n=4) (N=5, 1 missing)	SEC (n=9) (N=9, 0 missing)	Total (n=28)
Less than \$25,000	-	-	-	-	-	0
\$25,001-\$50,000	-	-	-	-	-	0
\$50,001-\$100,000	1 (20%)	-	-	-	-	1 (3.6%)
\$100,001-\$150,000	-	-	-	-	-	0
\$150,001-\$200,000	1 (20%)	-	-	-	-	1 (3.6%)
\$200,001-\$250,000	-	-	-	-	-	0
\$250,001-\$300,000	-	1 (20%)	1 (20%)	-	-	2 (7.1%)
\$300,001-\$350,000	-	-	1 (20%)	-	-	1 (3.6%)
\$350,001-\$400,000	1 (20%)	-	-	-	-	1 (3.6%)
\$400,001-\$450,000	-	-	1 (20%)	-	1 (11.1%)	2 (7.1%)
\$450,001-\$500,000	1 (20%)	1 (20%)	-	-	1 (11.8%)	3 (10.7%)
\$500,001 and up	1 (20%)	3 (60%)	2 (40%)	4 (100%)	7 (77.8%)	17 (60.7%)
Total	5	5	5	4	9	28

Table 5 presents the medical expenses related to athletic injury/illness applied to institutional budgets for responding institutions from July 1, 2016 through June 30, 2017. Three of the 29 (7.7%) responding institutions indicated the institution did not have this information

available while 14 of the 26 (53.8%) respondents indicated spending more than \$500,000 on athletic medical expenses.

Table 5

Athletic Injury/Illness Medical Expenses

Conference	ACC (n=6) (N=6)	Big Ten (n=5) (N=6, 1 missing)	Big 12 (n=5) (N=5, 0 missing)	Pac 12 (n=4) (N=5, 1 missing)	SEC (n=9) (N=9, 0 missing)	Total (n=26)
Less than \$25,000	-	-	-	-	-	0
\$25,001-\$50,000	1 (16.7%)	-	-	-	-	1 (3.8%)
\$50,001-\$100,000	-	-	-	-	-	0
\$100,001-\$150,000	1 (16.7%)	-	-	-	-	1 (3.8%)
\$150,001-\$200,000	-	-	-	-	-	0
\$200,001-\$250,000	-	-	-	-	-	0
\$250,001-\$300,000	-	1 (20%)	3 (60%)	-	-	4 (15.4%)
\$300,001-\$350,000	-	1 (20%)	-	-	1 (11.1%)	2 (7.7%)
\$350,001-\$400,000	1 (16.7%)	-	-	-	-	1 (3.8%)
\$400,001-\$450,000	1 (16.7%)	-	-	-	1 (11.1%)	2 (7.7%)
\$450,001-\$500,000	-	-	-	-	1 (11.1%)	1 (3.8%)
\$500,001 and up	2 (33.3%)	2 (40%)	1 (20%)	4 (100%)	5 (55.6%)	14 (53.8%)
Institution does not have this information available	-	1 (20%)	1 (20%)	-	1 (11.1%)	3
Total	6	5	5	4	9	26*

*Note: 3 institutions did not have this information available (29 responding institutions)

Table 6 presents the medical expenses related to non-athletic injury/illness applied to institutional budgets for responding institutions from July 1, 2016 through June 30, 2017. Forty percent (8/20) of respondents indicated their institution did not have this information available. Over 90% (11/12) of respondents spent \$500,000 or below in non-athletic injury/illness expenses leaving only 8.3% (1/12) of respondents spending more than \$500,000. Of those responding, certain conferences (the Big Ten [75%] and the Pac-12 [100%]) indicated the institution did not have this information available more often than other conferences. As a conference, the ACC indicated spending the least on non-athletic injury/illness medical expenses with 75% responding

in the \$25,001-\$50,000 range; one of the SEC institutions (16.7%) spent the most on non-athletic injury/illness expenses indicating it spent in the \$500,001 and up range.

Table 6

Non-Athletic Injury/Illness Medical Expenses

Conference	ACC (n=4) (N=6, 2 missing)	Big Ten (n=4) (N=6, 2 missing)	Big 12 (n=4) (N=5, 1 missing)	Pac 12 (n=2) (N=5, 3 missing)	SEC (n=6) (N=9, 3 missing)	Total (n=12)
Less than \$25,000	-	-	-	-	-	0
\$25,001-\$50,000	3(75%)	-	-	-	-	3 (25%)
\$50,001-\$100,000	1 (25%)	1 (25%)	1 (25%)	-	-	3 (25%)
\$100,001-\$150,000	-	-	-	-	1 (16.7%)	1 (8.3%)
\$150,001-\$200,000	-	-	-	-	1(16.7%)	1 (8.3%)
\$200,001-\$250,000	-	-	1 (25%)	-	1(16.7%)	2 (16.7%)
\$250,001-\$300,000	-	-	-	-	-	0
\$300,001-\$350,000	-	-	-	-	-	0
\$350,001-\$400,000	-	-	-	-	-	0
\$400,001-\$450,000	-	-	1 (25%)	-	-	1 (8.3%)
\$450,001-\$500,000	-	-	-	-	-	0
\$500,001 and up	-	-	-	-	1(16.7%)	1 (8.3%)
Institution does not have this information available	-	3 (75%)	1 (25%)	2 (100%)	2 (33.3%)	8
Total	4	4	4	2	6	12

**Note:* 8 institutions did not have this information available (20 responding institutions)

RQ2: What costs are institutions covering for medical care of student-athletes? One hundred percent of the responding institutions paid any and all of the medical expenses for student-athletes that resulted from athletic participation/covered events that were not covered by any other insurance. Seventy-one percent (22/31) of the responding institutions paid for medical care for student-athletes that resulted from incidents other than athletic team participation/covered events. When analyzed by conference, the ACC had 4 (66.7%), Big Ten had 5 (83.3%), Big 12 had 4 (80%), Pac-12 had 3 (60%), and the SEC had 6 (66.7%) respondents indicate the institution paid for medical care for student-athletes that resulted from incidents other than athletic team participation/covered events.

Of the 71% that paid for medical care for student-athletes that resulted from incidents other than athletic team participation/covered events(non-athletic), services institutions covered included, but were not be limited to, the categories listed in Table 7. Services considered non-athletic most commonly covered by institutions included illness (100%), vision care/products (95.5%), psychological/counseling/mental health services (95.5%), medications/prescriptions (95.5%), durable medical equipment (95.5%), and athletic clearance related services (90.9%). With an over 90% rate of coverage, these areas represented the most commonly covered expenses.

Table 7

Non-Athletic Medical Services Paid for by the Institution

Non-Athletic Medical Services	Frequency	Percentage (%)
Illness not directly related to athletic participation	22	100%
Vision care/products	21	95.5%
Psychological / counseling / mental health services	21	95.5%
Medications / prescriptions	21	95.5%
Durable medical equipment	21	95.5%
Athletic clearance related services	20	90.9%
Dental care	19	86.4%
Substance addiction/abuse services	19	86.4%
Preventative / general health services	16	72.7%
Orthopedic injuries occurring in events other than team / athletic department supervised physical activities/ covered events	15	68.2%
Injuries occurring in events other than team (non-orthopedic)	15	68.2%
Other	5	22.7%

Of the 22.7% respondents indicating “other” non-athletic medical expenses were paid, the responses included: (a) diagnostic testing prior to final diagnosis, (b) electing not to cover preexisting medications or walk on pre-existing clearance related services, (c) electing to cover a portion of non-athletic medical care but not the entire cost (example: wisdom teeth removal but not routine dental care), (d) electing not to cover care if student-athlete elects to seek care outside the institution’s system but all care internal to the institution’s system is paid for by the

institution, and (e) electing to pay for care related to the diagnosis of a non-athletic related issue, then determining additional coverage at the time of diagnosis.

For the 95.5% indicating durable medical equipment non-athletic expenses were paid, 4.8% paid for durable medical equipment under the medical expenses' budgets, 9.5% paid for durable medical equipment under institutional funds, 85.7% paid for durable medical equipment utilizing both medical expense budgets and institutional funds.

RQ3: What are the policies utilized by institutions of higher education in the management of medical care expenses? What effect do policies have on medical expenses (if any)?

Policy on Primary Insurance. NCAA member institutions are required to verify student-athletes have insurance coverage for medical expenses resulting from athletically related injuries before a student-athlete can play or practice. This coverage may result from a parent/guardian policy, a personal policy for the student-athlete, or the institution. (reprinted from Survey Instrument).

There were multiple methods institutions utilized to meet the NCAA requirement on primary insurance of a student-athlete (Table 8). These methods may be used alone or in combinations to achieve compliance. Utilizing student-athlete's own coverage / policy (individual, parent, or guardian) is utilized if available but not required; if student-athlete has no coverage, the institution / institution's policy becomes primary (77.4%), institutional self-insurance (61.3%) and requiring the student-athlete to provide coverage for use as primary (54.8%) were indicated as being used by more than half of respondents.

Table 8

Institutional Policy on Primary Insurance

Method of Satisfying Requirement on Insurance	Frequency	Percentage (%)
Student-athlete's own coverage / policy (individual, parent, or guardian) is utilized if available but not required; if student-athlete has no coverage, the institution / institution's policy becomes primary	24	77.4%
Institution self-insures (i.e. pays "out of pocket"/from institutional funds) for medical expenses resulting from athletically related injuries	19	61.3%
Student-athlete is required to provide evidence of coverage (through individual, parent, or guardian policy) for use as primary	17	54.8%
Institution purchases individual policy for student-athlete with intercollegiate athletic injury coverage benefits	13	41.9%
Other	6	19.4%

Of those institutions selecting "other", methods included (a) self-funding injuries to \$10,000 at which point insurance policy begins payments, (b) requiring non-scholarship athletes to provide proof of insurance, (c) institution purchases insurance policies for student-athlete who does not have insurance and participates in high risk sports only, (d) the University system requires all students to have primary insurance that meets a standard- it is not an athletic requirement, (e) if an athlete's insurance is not available, then institution covers out of pocket, and (f) purchasing an excess policy to cover expenses over \$10,000.

Utilizing the student-athlete's own coverage/policy (individual, parent, or guardian) is utilized if available but not required; if student-athlete has no coverage, the institution/ institution's policy becomes primary was most commonly chosen policy by the Big Ten, Pac-12, and SEC. The Big 12 had two selections chosen equally often and most often among members: (a) utilizing the student-athlete's own coverage/policy (individual, parent, or guardian) is utilized if available but not required; if student-athlete has no coverage, the institution / institution's policy becomes primary and (b) institutional self-insurance. The ACC most often indicated the

student-athlete is required to provide evidence of coverage (through individual, parent, or guardian policy) for use as primary which was chosen by 100% the ACC responding participants. No other selection by conference was selected by 100% of responding institutions (Table 9).

Table 9

Institutional Policy on Primary Insurance by Conference

Method of Satisfying Requirement on Insurance	ACC (n=6) Frequency (%)	Big Ten (n=6) Frequency (%)	Big 12 (n=5) Frequency (%)	Pac-12 (n=4) Frequency (%)	SEC (n=9) Frequency (%)
Student-athlete’s own coverage / policy (individual, parent, or guardian) is utilized if available but not required; if student-athlete has no coverage, the institution / institution’s policy becomes primary	4 (66.7%)	4 (66.7%)	4 (80%)	4 (80%)	8 (88.9%)
Institution self-insures (i.e. pays “out of pocket”/from institutional funds) for medical expenses resulting from athletically related injuries	3 (50%)	3 (50%)	4 (80%)	3 (60%)	6 (66.7%)
Student-athlete is required to provide evidence of coverage (through individual, parent, or guardian policy) for use as primary	6 (100%)	3 (50%)	2 (40%)	0 (0%)	6 (66.7%)
Institution purchases individual policy for student-athlete with intercollegiate athletic injury coverage benefits	5 (83.3%)	3 (50%)	2 (40%)	3 (60%)	0 (0%)
Other	0 (0%)	1 (16.7%)	1 (20%)	2 (40%)	2 (22.2%)

Comparison of Medical Expenses to Policy on Primary Insurance. The institutional choice of method used to satisfy the NCAA requirement for student-athlete insurance was compared to overall medical expenses equal to or below \$500,000 and overall medical expenses above \$500,000 (Table 10). No statistical significance was found between any method utilized by the institution and the expense category. When choice of policy on primary was compared to (a) overall medical expenses equal to or below \$500,000 or (b) overall medical expenses over \$500,000, no statistical significance was found. For those institutions that required student-

athletes to provide coverage, 72.7% had overall annual medical expenses equal to or below \$500,000.00 and 47.1% had overall annual medical expenses over \$500,000.00. For those institutions that utilized the student-athlete's own coverage/policy (individual, parent or guardian) if available but not required; if student-athlete has no coverage, the institution/institution's policy become primary, 81.8% had overall annual medical expenses equal to or below \$500,000.00 and 88.2% had overall annual medical expenses over \$500,000.00. For those institutions that purchased individual policies for student-athletes with athletic injury benefits, 63.6% had overall annual medical expenses equal to or below \$500,000.00 and 35.3% had overall annual medical expenses over \$500,000.00. For those institutions that self-insured, 54.5% had overall annual medical expenses equal to or below \$500,000.00 and 70.6% had overall annual medical expenses over \$500,000. For those institutions that selected "other", 9.1% had overall annual medical expenses equal to or below \$500,000 and 29.4 % had overall annual medical expense over \$500,000.

Table 10

Comparison of Overall Medical Expenses to Policy on Primary Insurance

	Equal to/below 500K (n=11)	Over 500K (n=17)	Chi-Square (Sig.)
Student-athlete is required to provide evidence of coverage (through individual, parent, or guardian policy) for use as primary			1.797 (<i>p</i> =.180)
• No	3/11 (27.3%)	9/17 (52.9%)	
• Yes	8/11 (72.7%)	8/17 (47.1%)	
Student-athlete's own coverage /policy) individual, parent or guardian) is utilized if available but not required; if student-athlete has no coverage, the institution / institution's policy become primary.			.225 (<i>p</i> =.636)
• No	2/11 (18.2%)	2/17 (11.8%)	
• Yes	9/11 (81.8%)	15/17 (88.2%)	
Institution Purchases Individual policy for student-athlete with athletic injury benefit			2.157 (<i>p</i> =.142)
• No	4/11 (36.4%)	11/17 (64.7%)	
• Yes	7/11 (63.6%)	6/17 (35.3%)	
Institution self-insures (i.e. pays out of pocket"/from institutional funds) for medical expenses for resulting from athletically related injuries			.749 (<i>p</i> =.387)
• No	5/11 (45.5%)	5/17 (29.4%)	
• Yes	6/11 (54.5%)	12/17 (70.6%)	
Other			1.638 (<i>p</i> =.201)
• No	10/11 90.9%)	12/17 (70.6%)	
• Yes	1/11 (9.1%)	5/17 (29.4%)	

Eight of 29 of responding institutions required all student-athletes to have a personal active primary insurance/coverage for medical expenses related to athletic injuries. Twenty-one of 29 of responding institutions did not require all student-athletes to have a personal active primary insurance/coverage for medical expenses related to athletic injuries.

Twenty-Five of 29 of institutions verified the student-athlete's policy was active. Four of the responding institutions did not verify the student-athlete's policy is active. Of those 25 that

verified the student-athlete’s personal policy is active, 8 used outside agency/contracted entity to complete verification and 17 had staff complete the verification.

Policy on Institutional Coverage. NCAA member institutions are provided coverage under the NCAA Catastrophic Injury Insurance Policy after this policy’s \$90,000 deductible is met (* For members participating in the NCAA group Accident Medical Program the deductible is \$75,000) (reprinted from Survey Instrument).

There were multiple methods institutions utilized to address medical expenses/coverage up to the NCAA Catastrophic Injury Insurance Program deductible (Table 11). These methods may have been used alone or in combination to achieve compliance. This study identified the more common practices institutions were utilizing to fund up to the NCAA deductible as self-insurance (61.3%) and purchase of commercial policies (58.1%). Two (2) of the 28 schools responding to this question purchased the NCAA Group Accident Medical Plan. The range of premiums reported for commercial polices was as vast as was the range of deductibles.

Table 11

Policy on Institutional Coverage

Method Providing Coverage	Frequency	Percentage (%)
Self-insure (Pay “out of pocket”/institutional budget) for medical costs	19	61.3%
Purchase other commercial insurance policy	18	58.1%
Require student-athlete to provide coverage for expenses	3	9.7%
Purchase the NCAA Group Accident Medical Program Plan	2	6.5%

Of those institutions that purchased other commercial policies to cover expenses up to the NCAA catastrophic injury deductible, 14 purchased fully insured plans, 3 purchased aggregate plans, and 1 purchased “other”; no institution selected the option for captives. Premiums for types of commercial plans purchased varied. (Table 12)

Table 12

Institutional Premiums by Type of Commercial Plan

Annual Premium	Total Responses Frequency (Percentage based on total responses)	Fully Insured Frequency (Percentage based on total responses)	Aggregate Frequency (Percentage based on total responses)	Other Frequency (Percentage based on total responses)
Under \$50,000	4 (25%)	4 (30.8%)		
\$50,001-\$100,000	2 (12.5%)	2 (15.4%)		
\$100,001-\$150,000	3 (18.8%)	1 (7.7%)	2 (100%)	
\$150,001-\$200,000	2 (12.5%)	2 (15.4%)		
\$201,000-\$250,000	1 (6.3%)	1 (7.7%)		
\$300,001-\$350,000	1 (6.3%)	1 (7.7%)		
\$350,001-\$400,000	1 (6.3%)	1 (7.7%)		
Above \$500,000	2 (12.5%)	1 (7.7%)		1 (100%)
Total responses	16	13	2	
Missing responses	15	1	1	

Of those 14 institutions that purchased fully insured plans, 1 institutional premium response was missing, therefore unknown. Of those utilizing fully insured plans, responses indicated two had deductibles below \$1,000.00, seven had deductibles in the \$5,001-\$10,000 range, one had a deductible in the \$10,001-\$15,000 range, one had a deductible in the \$15,001-\$20,000 range, and two had deductibles in the \$20,001-\$25,000 range. Of those three institutions that purchased aggregate plans, one response was missing and therefore unknown. Of the known responses, one had an aggregate attachment point \$100,000 or below and one had an aggregate attachment point in the \$400,000-\$450,000 range.

Members of the ACC (50%), Big 12 (60%), and the SEC (77.8%) equally indicated purchase of other commercial insurance policy and self-insurance as the most common methods (Table 13). The Big Ten's most commonly utilized method was self-insured at 83.3% with the Pac-12's most commonly utilized method at 60% as purchasing other commercial policy. The ACC and the SEC were the only conferences with members participating in the NCAA Group Accident Medical Program Plan.

Table 13

Policy Institutional Coverage by Conference

Method of Satisfying Requirement on Institutional Coverage	ACC (n=6)	Big Ten (n=6)	Big 12 (n=5)	Pac-12 (n=4)	SEC (n=9)
	Frequency (%)	Frequency (%)	Frequency (%)	Frequency (%)	Frequency (%)
Purchase the NCAA Group Accident Medical Program Plan	1 (16.7%)	0 (0%)	0 (0%)	0 (0%)	1 (11.1%)
Purchase other commercial insurance policy	3 (50 %)	2 (33.3%)	3 (60%)	3 (60%)	7 (77.8%)
Self-insure (Pay “out of pocket”/institutional budget) for medical costs	3 (50%)	5 (83.3%)	3 (60%)	1 (20%)	7 (77.8%)
Require student-athlete to provide coverage for expenses	2 (33.3%)	1 (16.7%)	0 (0%)	0 (0%)	0 (0%)
Other	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)

Comparison of medical expenses to institutional coverage. When choice of policy on institutional coverage was compared to (a) overall medical expenses equal to or below \$500,000 or (b) overall medical expenses over \$500,000, no statistical significance was found (Table 14). For those institutions that purchased the NCAA Group Accident Medical Program Plan, 9.1% had overall annual medical expenses equal to or below \$500,000.00 and 5.9% had overall annual medical expenses over \$500,000.00; note there was no statistical significance. For those institutions that purchased other commercial policy, 63.6% had overall annual medical expenses equal to or below \$500,000.00 and 58.8% had overall annual medical expenses over \$500,000.00; note there was no statistical significance. For those institutions that self-insured for medical costs, 63.6% had overall annual medical expenses equal to or below \$500,000.00 and 64.7% had overall annual medical expenses over \$500,000.00; note there was no statistical significance. For those institutions that required student-athlete to provide coverage for expenses, 9.1% had overall annual medical expenses equal to or below \$500,000.00 and 5.9% had overall annual medical expenses over \$500,000.00; note there was no statistical significance.

Table 14

Comparison of Expenses to Policy on Institutional Coverage

	Equal to/below 500K N (%)	Over 500K N (%)	Chi-Square (Sig.)
Purchase the NCAA Group Accident Medical Program Plan			.104 ($p=.747$)
• No	10/11 (90.9%)	16/17 (94.1%)	
• Yes	1/11 (9.1%)	1/17(5.9%)	
Purchase other commercial insurance policy			.065 ($p=.799$)
• No	4/11 (36.4%)	7/17 (41.2%)	
• Yes	7/11 (63.6%)	10/17 (58.8%)	
Self Insure (pay “out of pocket”/from institutional budget) for medical costs			.003 ($p=.954$)
• No	4/11 (36.4%)	6/17 (35.3%)	
• Yes	7/11 (63.6%)	11/17 (64.7%)	
Require student-athlete to provide coverage for expenses			.104 ($p=.747$)
• No	10/11 (90.9%)	16/17 (94.1%)	
• Yes	1/11 (9.1%)	1/17 (5.9%)	

RQ4: What are the medical expenses coordination and management strategies utilized by institutions of higher education in the management of medical care expenses? What effect do strategies have on medical expenses (if any)?

Coordinating the management of claims. Institutions utilized differing personnel approaches for the responsibility of coordinating the management of medical expense claims (Table 15). Of the 31 participating institutions, two did not respond to the question. Of those 29 institutions responding, 22 had an insurance coordinator, three used an athletic training/sports medicine staff member with other responsibilities, two had multiple staff positions within the institution with this responsibility, one used an athletic training/sports medicine staff member where this is their primary responsibility, one was “other” (indicating utilization of hospital acting as TPA), zero/none used institutional administrator, and zero/none used student health center.

Table 15

Personnel Coordinating the Management of Claims

Coordinating the Management of Claims	Frequency	Percentage (%)
Insurance coordinator	22	75.9%
Athletic training/sports medicine staff member with other responsibilities	3	10.3%
Multiple staff positions within the institution with this responsibility	2	6.9%
Athletic training/sports medicine staff 's primary responsibility	1	3.4%
Other	1	3.4%
Institutional administrator	0	0%
Student health center	0	0%

By conference, coordination and management of claims by an insurance coordinator was the most commonly utilized strategy by all institutions (Table 16). No members used institutional administrators or the student health center to coordinate or manage medical claims.

Table 16

Personnel Coordinating the Management of Claims by Conference

Coordinating the Management of Claims	ACC (n=6) Frequency (%)	Big Ten (n=6) Frequency (%)	Big 12 (n=5) Frequency (%)	Pac-12 (n=4) Frequency (%)	SEC (n=9) Frequency (%)
Athletic training/sports medicine staff member with other responsibilities	1 (16.7%)	0	0	0	2 (22.2%)
Athletic training/sports medicine staff 's primary responsibility	0	0	0	0	1 (11.1%)
Multiple staff positions within the institution with this responsibility	1 (16.7%)	1 (16.7%)	0	0	0
Insurance coordinator	4 (66.7%)	4 (66.7%)	5 (100%)	3 (75%)	6 (66.7%)
Institutional administrator	0	0	0	0	0
Student health center	0	0	0	0	0
Other	0	0	0	1 (25%)	0
Missing		1 (16.7%)			

Comparison of medical expenses to insurance coordinator. Of the 29 responses, over 75% had an insurance coordinator. For those institutions that utilized an insurance coordinator to manage medical claims, 81.8% had overall annual medical expenses equal to or below \$500,000.00 and 76.5 % had overall annual medical expenses over \$500,000.00, hence no statistical significance was found (Table 17).

Table 17

Comparison of Expenses to Insurance Coordinator

	Equal to/below 500K n (%)	Over 500K n (%)	Chi-Square (Sig.)
Choice: insurance coordinator			.113 (p=.736)
• No	2/11 (18.2%)	4/17 (23.5%)	
• Yes	9/11 (81.8%)	13/17 (76.5%)	

Strategies to Reduce Overall Costs. Institutions utilized various strategies to reduce the overall costs applied to institutional budgets for medical care expenses (Table 18). All institutions utilized some strategy to reduce costs with relationships (direct contractual [77.4%] or informal agreements [54.8%]) between institution and facilities/providers and employing/contracting medical provider (54.8%) being the most common. Few (12.9%) used consortial purchasing practices.

Table 18

Strategies to Reduce Overall Costs

Strategies to Reduce Overall Costs	Frequency	Percentage (%)
Direct contractual relationships between the institution and medical facilities/providers used by student-athletes	24	77.4%
Informal agreements for reduction of cost for services/goods with medical providers used by student-athletes	17	54.8%
Employing/Contracting medical providers within the athletic department to provide medical services	17	54.8%
Utilization of TPA	15	48.4%
Purchase of private individual policy with coverage benefits for a student-athlete without primary insurance	11	35.5%
Consortial purchasing practices	5	16.1%
Other	4	12.9%
None	0	0%

Those institutions that selected other indicated (a) athletic trainers sought primary insurance authorization when possible, (b) consulting claims repricing agent, (c) injury prevention, education to patient and coaches to understand appropriate care not to do unnecessary procedures and negotiating each individual medical bill, and (d) purchase of Student Health Insurance Plan through campus for uninsured and international SAs. Of the 15 institutions that utilized a TPA, ten provided the associated fees the institution pays for this service. The TPA fee ranges demonstrated a wide variance ranging from flat fees to a percent of the overall premium. Of the 11 that purchased a private individual policy with coverage benefits for a student-athlete without primary insurance, ten indicated the policy had intercollegiate athletic benefits. The premiums were reported to widely vary.

The number of student-athletes that these policies were purchased for range from 18-160. The demographics of the student-athletes these policies were purchased for were scholarship ($n=5$), international ($n=10$), case by case ($n=6$), sport ($n=2$), and other ($n=2$).

For strategies to reduce overall costs by conference (Table 19), the most often utilized by the ACC included direct contractual and informal agreement relationships, purchase of a private

individual policy for the student-athlete to utilize as primary and employing/contracting with medical providers (83.3%). The Big Ten's most common strategy was employing/contracting with medical providers at 83.3%. The Big 12 chose utilization of a TPA most often at 80%. The Pac-12 and the SEC's most common strategy was direct contractual relationships at 80% and 88.9% respectively.

Table 19

Strategies to Reduce Overall Costs by Conference

Strategies to Reduce Overall Costs	ACC (n=6) Frequency (%)	Big Ten (n=6) Frequency (%)	Big 12 (n=5) Frequency (%)	Pac-12 (n=4) Frequency (%)	SEC (n=9) Frequency (%)
None	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Utilization of TPA	0 (0%)	3 (50%)	4 (80%)	2 (40%)	6 (66.7%)
Direct contractual relationships between the institution and medical facilities/providers used by student-athletes	5 (83.3%)	4 (66.7%)	3 (60%)	4 (80%)	8 (88.9%)
Informal agreements for reduction of cost for services/goods with medical providers used by student-athletes	5 (83.3%)	2 (33.3%)	2 (40%)	3 (60%)	5 (55.6%)
Consortial purchasing practices	0 (0%)	1 (16.7%)	2 (40%)	0 (0%)	2 (22.2%)
Purchase of private individual policy with coverage benefits for a student-athlete without primary insurance	5 (83.3%)	2 (33.3)	1 (20%)	2 (40%)	1 (11.1%)
Employing/Contracting medical providers within the athletic department to provide medical services	5 (83.3%)	5 (83.3%)	3 (60%)	2 (40%)	2 (22.2%)
Other	0 (0%)	1 (16.7%)	2 (40%)	2 (40%)	0 (0%)

Comparison of medical expenses to strategy to reduce cost. When choice of strategy to reduce cost was compared to (a) overall medical expenses equal to or below \$500,000 or (b) overall medical expenses over \$500,000, no statistical significance was found (Table 20). For those institutions that utilized a TPA for claims management/reductions, 45.5% had overall annual medical expenses equal to or below \$500,000.00 and 58.8% had overall annual medical expenses over \$500,000.00. For those institutions that did not utilize a TPA, 54.5% had overall

annual medical expenses equal to or below \$500,000.00 and 41.2% had overall annual medical expenses over \$500,000.00. For those institutions that used direct contractual relationships, 72.7% had overall annual medical expenses equal to or below \$500,000.00 and 88.2% had overall annual medical expenses over \$500,000.00. For those institutions that utilized informal agreements, 54.5% had overall annual medical expenses equal to or below \$500,000.00 and 64.7% had overall annual medical expenses over \$500,000.00. For those institutions that used consortial purchasing practices, 9.1% had overall annual medical expenses equal to or below \$500,000.00 and 23.5% had overall annual medical expenses over \$500,000.00. For those institutions that purchased a private individual policy with coverage benefits for a student-athlete without primary insurance, 36.6% had overall annual medical expenses equal to or below \$500,000.00 and 35.3% had overall annual medical expenses over \$500,000.00. For those institutions that employed/contracted with medical providers, 72.3% had overall annual medical expenses equal to or below \$500,000.00 and 47.1% had overall annual medical expenses over \$500,000.00; note there is no statistical significance. For those institutions that used other strategies, 9.1% had overall annual medical expenses equal to or below \$500,000.00 and 17.6% had overall annual medical expenses over \$500,000.00.

Table 20

Comparison of Expenses to Strategy to Reduce Costs

	Equal to/below 500K n (%)	Over 500K n (%)	Chi-Square (Sig.)
None			
• No	0/11 (0%)	0/17(0%)	
• Yes	0/11 (0%)	0/17 (0%)	
Utilization of TPA (third party administrators) for claims management/reductions			.480 (p=.488)
• No	6/11 (54.5%)	7/17 (41.2%)	
• Yes	5/11 (45.5%)	10/17 (58.8%)	
Direct contractual relationships between institution and medical facilities/providers used by student-athletes.			1.095 (p=.295)
• No	3/11 (27.3%)	2/17 (11.8%)	
• Yes	8/11 (72.7%)	15/17 (88.2%)	
Informal agreements for reduction of costs for services/goods with medical provides used by student-athletes			.289 (p=.591)
• No	5/11 (45.5%)	6/17 (35.3%)	
• Yes	6/11 (54.5%)	11/17 (64.7%)	
Consortial purchasing practices			.949 (p=.330)
• No	10/11 (90.9%)	13/17 (76.5%)	
• Yes	1/11 (9.1%)	4/17 (23.5%)	
Purchase of private individual policy with coverage benefits for a student-athlete without primary insurance			.003 (p=.954)
• No	7/11 (63.6%)	11/17 (64.7%)	
• Yes	4/11 (36.6%)	6/17 (35.3%)	
Employing /Contracting with medical providers within the athletic department to provide medical services			1.797 (p=.180)
• No	3/11 (27.3%)	9/17 (52.9%)	
• Yes	8/11 (72.3%)	8/17 (47.1%)	
Other			.399 (p=.527)
• No	10/11 (90.9%)	14/17 (82.4%)	
• Yes	1/11 (9.1%)	3/17 (17.6%)	

Seventeen institutions responded to strategies to reduce costs by employing/contracting medical providers within the athletic department to provide medical services (Table 21). Of those responding institutions, 50% or more employ/contract nutritionist/registered dietician(s) (82.4%), physical therapist(s) (76.5%), chiropractor(s) (76.5%), physicians(s) (76.5%),

psychologist/psychiatrist/mental health professional(s) (76.5%) and massage therapist(s) (64.7%).

Table 21

Strategy to Reduce Cost by Employing/Contracting

Employing/Contracting	Frequency	Percentage (%)
Nutritionist/registered dietician(s)	14	82.4%
Physical therapist(s)	13	76.5%
Chiropractor(s)	13	76.5%
Physicians(s)	13	76.5%
Psychologist/psychiatrist/mental health professional(s)	13	76.5%
Massage therapist(s)	11	64.7%
Institutional radiological services	8	47.1%
Pharmacist/prescription service(s)	6	35.3%
Institutional hospital services	5	29.4%
Ophthalmologist(s)	5	29.4%
Laboratory services	4	23.5%
Dentist(s)	4	23.5%
Other	2	11.8%
Total	111 total selections	

Of the two institutions that indicated “other”, one employed/contracted an optometrist and one employed/contracted a registered nurse.

When evaluating strategies to reduce costs by conference (Table 22), 4 of the 5 conferences selected nutritionist/registered dietician(s) most often; only the Pac-12 did not employ this provider. The ACC most commonly selected chiropractor(s) and nutritionist/registered dietician(s) both at 83.3%, the Big Ten most commonly selected physicians(s) and nutritionist/registered dietician(s) both at 83.3%, the Big 12 most commonly selected chiropractor(s) and physician(s) both at 60%, the Pac-12 most commonly selected institutional radiological services at 50%, and the SEC most commonly selected physical therapist(s), chiropractor(s), physician(s), psychological/psychiatrist/mental health professional(s), and nutritionist/registered dietician(s) all at 22.2%.

Table 22

Strategy to Reduce Cost by Employing/Contracting by Conference

Employing/Contracting	ACC (n=6) Frequency (%)	Big Ten (n=6) Frequency (%)	Big 12 (n=5) Frequency (%)	Pac-12 (n=4) Frequency (%)	SEC (n=9) Frequency (%)
Institutional hospital services	2 (33.3%)	1 (16.7%)	0 (0%)	1 (25%)	1 (11.1%)
Institutional radiological services	2 (33.3%)	3 (50%)	0 (0%)	2 (50%)	1 (11.1%)
Physical therapist(s)	5 (83.3%)	4 (66.7%)	2 (40%)	0 (0%)	2 (22.2%)
Massage therapist(s)	4 (66.7%)	4 (66.7%)	2 (40%)	0 (0%)	1 (11.1%)
Chiropractor(s)	5 (83.3%)	3 (50%)	3 (60%)	0 (0%)	2 (22.2%)
Physicians(s)	3 (50%)	5 (83.3%)	3 (60%)	0 (0%)	2 (22.2%)
Laboratory services	2 (33.3%)	0 (0%)	0 (0%)	1 (25%)	1 (11.1%)
Dentist(s)	1 (16.7%)	1 (16.7%)	1 (20%)	0 (0%)	1 (11.1%)
Ophthalmologist(s)	1 (16.7%)	2	1 (20%)	0 (0%)	1 (11.1%)
Psychologist/psychiatrist/mental health professional(s)	5 (83.3%)	4 (66.7%)	2 (40%)	0 (0%)	2 (22.2%)
Nutritionist/registered dietician(s)	5 (83.3%)	5 (83.3%)	3 (60%)	0 (0%)	2 (22.2%)
Pharmacist/prescription service(s)	1 (16.7%)	3 (50%)	0 (0%)	1 (25%)	1 (11.1%)
Other	1 (16.7%)	0 (0%)	1 (20%)	0 (0%)	0 (0%)
	Optometrist		RN		

Comparison of medical expenses to employing/contracting strategy. When employment/contracting strategy was compared to (a) overall medical expenses equal to or below \$500,000 or (b) overall medical expenses over \$500,000, only one selection resulted in statistical significance. For those institutions employing/contracting with chiropractor(s), 72.7% had overall annual medical expenses equal to or below \$500,000.00 and 23.5% had overall annual medical expenses over \$500,000.00, resulting in statistical significance; however, after adjusting for type 1 error inflation, (.05/13=.0038), this finding was likely due to chance.

For those institutions employing/contracting with institutional/hospital services, 9.1% had overall annual medical expenses equal to or below \$500,000.00 and 17.6% had overall annual medical expenses over \$500,000.00. For those institutions employing/contracting with institutional radiology services, 27.3% had overall annual medical expenses equal to or below \$500,000.00 and 29.4% had overall annual medical expenses over \$500,000.00. For those

institutions employing/contracting with physical therapist(s), 63.6% had overall annual medical expenses equal to or below \$500,000.00 and 29.4% had overall annual medical expenses over \$500,000.00. For those institutions employing/contracting with massage therapist(s), 54.5% had overall annual medical expenses equal to or below \$500,000.00 and 23.5% had overall annual medical expenses over \$500,000.00. For those institutions employing/contracting with physician(s), 54.5% had overall annual medical expenses equal to or below \$500,000.00 and 35.3 % had overall annual medical expenses over \$500,000.00. For those institutions employing/contracting with laboratory services, 18.2% had overall annual medical expenses equal to or below \$500,000.00 and 11.8% had overall annual medical expenses over \$500,000.00. For those institutions employing/contracting with dentist(s), 9.1% had overall annual medical expenses equal to or below \$500,000.00 and 17.6 % had overall annual medical expenses over \$500,000.00. For those institutions employing/contracting with ophthalmologist, 9.1% had overall annual medical expenses equal to or below \$500,000.00 and 23.5% had overall annual medical expenses over \$500,000.00. For those institutions employing/contracting with psychologist/psychiatrist/mental health professional(s), 54.5% had overall annual medical expenses equal to or below \$500,000.00 and 35.3% had overall annual medical expenses over \$500,000.00. For those institutions employing/contracting with nutritionist/registered dietician, 63.6% had overall annual medical expenses equal to or below \$500,000.00 and 35.3% had overall annual medical expenses over \$500,000.00. For those institutions employing/contracting with pharmacists/prescription services, 9.1% had overall annual medical expenses equal to or below \$500,000.00 and 29.4% had overall annual medical expenses over \$500,000.00. For those institutions employing/contracting with other(s), 18.2% had overall annual medical expenses equal to or below \$500,000.00 and 0% had overall annual medical expenses over \$500,000.00.

Table 23

Comparison of Expenses to Employing/Contracting Strategy

	Equal to/below 500K n (%)	Over 500K n (%)	Chi-Square (Sig.)
Choice: Institutional / Hospital Services			.399 (p=.527)
• No	10/11 (90.9%)	14/17 (82.4%)	
• Yes	1/11 (9.1%)	3/17 (17.6%)	
Choice: Institutional radiology services			.015 (p=.903)
• No	8/11 (72.7%)	12/17 (70.6%)	
• Yes	3/11 (27.3%)	5/17 (29.4%)	
Choice: Physical Therapist(s)			3.194 (p=.074)
• No	4/11 (36.4%)	12/17 (70.6%)	
• Yes	7/11 (63.6%)	5/17 (29.4%)	
Choice: Massage Therapist(s)			2.798 (p=.094)
• No	5/11 (45.5%)	13/17 (76.5%)	
• Yes	6/11 (54.5%)	4/17 (23.5%)	
Choice: Chiropractor(s)			6.601 (p=.010)
• No	3/11 (27.3%)	13/17 (76.5%)	
• Yes	8/11 (72.7%)	4/17 (23.5%)	
Choice: Physician(s)			1.011 (p=.315)
• No	5/11 (45.5%)	11/17 (64.7%)	
• Yes	6/11 (54.5%)	6/17 (35.3%)	
Choice: Laboratory Services(s)			.225 (p=.636)
• No	9/11 (81.8%)	15/17 (88.2%)	
• Yes	2/11 (18.2%)	2/17 (11.8%)	
Choice: Dentist(s)			.399 (p=.527)
• No	10/11 (90.9%)	14/17 (82.4%)	
• Yes	1/11 (9.1%)	3/17 (17.6%)	
Choice: Ophthalmologist(s)			.949 (p=.330)
• No	10/11 (90.9%)	13/17 (76.5%)	
• Yes	1/11 (9.1%)	4/17 (23.5%)	
Choice: Psychologist/Psychiatrist/mental health professionals(s)			1.011 (p=.315)
• No	5/11 (45.5%)	11/17 (64.7%)	
• Yes	6/11 (54.5%)	6/17 (35.3%)	
Choice: Nutritionist/registered dietician(s)			2.157 (p=.142)
• No	4/11 (36.4%)	11/17 (64.7%)	
• Yes	7/11 (63.6%)	6/17 (35.3%)	
Choice: Pharmacists/prescription services			1.638 (p=.201)
• No	10/11 (90.9%)	12/17 (70.6%)	
• Yes	1/11 (9.1%)	5/17 (29.4%)	
Choice: Other			3.329 (p=.068)
• No	9/11 (81.8%)	17/17 (100%)	
• Yes	2/11 (18.2%)	0/17 (0%)	

Note: Other: Registered nurse and optometrist

This chapter presented the study findings and interpretations of the data collected. This chapter further detailed findings and identified commonality in policies or strategies used by respondents, and similarities were detailed as applicable. Through statistical analysis, this study failed to discover significant relationships between policy and expenses and strategies and expenses; this limitation may possibly be resolved by collecting the actual expenses verses the ranges of expenses. To this end, the findings are descriptive in nature and presentation.

Chapter V: Conclusion

The purpose of this study was to identify, evaluate, and compare the expenditures, policies, and strategies associated with the management of medical care expenses for student-athletes among institutions of higher education as members of the Power Five conferences. This study aimed to identify the approximate costs applied to athletic institutional budgets for the medical care of student-athletes in intercollegiate athletics. This study also aimed to identify what policies and strategies institutions implemented regarding medical expenses and insurance. This study further aimed to determine if relationships existed among policies and strategies employed by an institution and the institution's medical care expenditures.

Chapter 5 presents a summary of findings, interpretations, and discussion of the survey results on management of medical expenses for student-athletes among institutions of higher education as members of the Power Five Conferences. Recommendations for policy and strategy review and implementation are also presented. Conclusions, implications, and recommendations for use in practice and further study are presented.

Research Questions

The following research questions were examined in this study:

- RQ1: What are the annual costs of medical care expenses for student-athletes in intercollegiate athletics?
- RQ2: What costs are institutions covering for medical care of student-athletes?
- RQ3: What are the policies utilized by institutions of higher education in the management of medical care expenses? What effect do policies have on medical expenses (if any)?

- RQ4: What are the medical expenses coordination and management strategies utilized by institutions of higher education in the management of medical care expenses?

What effect do strategies have on medical expenses (if any)?

Summary of Findings & Recommendations for Policy and Strategy Implementation

Through statistical analysis, this study failed to discover statistically significant relationships between policies and expenses and strategies and expenses; this limitation may possibly be resolved by collecting the actual expenses verses the ranges of expenses. To this end, the findings are descriptive in nature and application. Overall survey response rate was 47.7% (31/65). By conference, these results represent 40% of the ACC, 42.9% of the Big Ten, 50% of the Big 12, 41.7% of the Pac-12, and 64.4% of the SEC institutions.

RQ1: What are the annual costs of medical care expenses for student-athletes in intercollegiate athletics? Research question 1 focused on identifying the medical expenses applied to institutional budgets for student-athletes' medical care at Power Five institutions. These expenses fall into three categories as applicable by institutional and NCAA insurance policies: overall medical expenses, athletic expenses, and non-athletic expenses. Over half (60.7% or 17/28) of responding institutions spent over \$500,000 in the 2016-2017 fiscal year for overall medical expenses. These figures represent a snapshot; tracking these costs over time would reveal trends helpful in financial planning.

Having only the overall expense provides department administrators and market professionals a valuable but incomplete look at athletic department spending for medical expenses. By identifying and understanding the athletic costs verses the non-athletic costs, the picture of student-athlete benefits and areas where modifications could be made without violating requirements can be identified. Furthermore, by tracking the losses by athletic and

non-athletic categories, greater insight into managing spending and the policies that impact spending could occur.

For athletic expenses, 53.8% (14/26) spent over \$500,000 while 7.7% (3/29) did not have this information available. Athletic expense losses are considered accidental losses, meaning they can be insured. By evaluating loss history over multiple years and projecting potential future loss exposures, administrators would have the data to make effective risk management, policy, and financial decisions. Understanding the amounts paid annually under the athletic expenses category could aid in evaluation of the reinsurance practices of institutions including adjusting method(s), altering deductibles when commercial policies are used, and investigating how best to serve the financial needs of the institution through implementation of policies and strategies. These data provided objective insight into what was spent. No source was identified through published literature review that provided this type of information.

For non-athletic expenses, 40% (8/20) of responding institutions did not have this information; 8.3% (1/12) spent over \$500,000 in expenses, with 90% (11/12) spending \$500,000 or below. Fifty percent (6/12) of institutions indicated spending ranges for non-athletic expenses were between \$25,001 and \$100,000. No sources were identified through published literature review that provided this type of information. As these expenses are not the result of athletic participation/covered events, coverage of these expenses by the institution is not an NCAA requirement. In addition, these expenses fall outside typical institutional secondary or commercial policies and therefore are not eligible for reimbursement to the institution from such reinsurance policies (secondary or commercial policies). In practical application, these non-athletic expenses represent a loss which institutions and the NCAA do not insure against. These non-athletic expenses can be identified (see RQ2 data and discussions). Institutions can decide if

and under what circumstances such expenses will be assumed by the athletic department budget. As discussions on benefits for student-athletes continue and areas of reduction of expense are required, the details and amounts included in this item can be provided for objective insight and assistance in financial planning discussions. Non-athletic medical care costs are an area where administrators can discuss modifications in attempts to reduce the impact of medical care expenses on institutional budgets while continuing to meet NCAA recommendations and requirements.

Some athletic departments did not differentiate among the categories of medical expense spending in this study. By failing to do so, a vital piece of data was omitted as the departments develop and adjust financial plans. Understanding what care and services are provided to student-athletes not only in athletic injury care but in services ranging from vision care to mental health services adds objectivity to the discussions on student-athlete benefits. Based on the limited data provided, the non-athletic expense is not only noteworthy but encompasses a wide variety of services. As the NCAA and the population it serves continue to call for expansion in the area of student-athlete medical care and benefits, knowing these numbers and services becomes the first step in being informed for the managing the expansion of the expense and being proactive versus reactive in policy development and discussions on allocation of funding. This study examined ranges of expense; by tracking actual amounts, relationships on effectiveness of policies and strategies may be identified, allowing for evidence-based foundation in planning future best practices for the institutions.

RQ2: What costs are institutions covering for medical care of student-athletes?

Research question 2 provides insight into what the medical expenses represent. All responding institutions within the Power Five designation covered all medical care expenses for student-

athletes resulting from athletic participation/covered events, which exceeded the rate reported in the NCAA survey of all Division I institutions (Burnsed, 2016). This was not unexpected, considering the institutions comprising this sample are known to have the greatest fiscal resources, possibly allowing these expenses to be assumed with less strife than less wealthy institutions. It did reveal the responding institutions are assuming the financial obligations for athletic related medical care for student-athletes during the fiscal year studied.

With 71% of the responding Power Five institutions paying for medical expense from events other than athletic participation/covered events, the importance of knowing what services these non-athletic expenses represent becomes increasingly important. Services considered non-athletic most commonly covered by responding institutions included illness (100%), vision care/products (95.5%), psychological/counseling/mental health services (95.5%), medications/prescriptions (95.5%), durable medical equipment (95.5%), and athletic clearance related services (90.9%). These Power Five institutions' commitment to the NCAA's mental health best practices recommendations was supported through the 95.5% coverage of those services. These non-athletic expenses are not eligible under the NCAA's catastrophic insurance policy program or most commercial policies as such policies are applicable to athletic injuries/covered events. This could represent significant exposure where there is no risk transfer option; any losses may represent increased expenses for the institution that are potentially non-recoverable. If institutions can identify common services resulting in greater expenses, the institution can investigate cost reduction strategies. By investigating cost reduction strategies, administrators choosing to cover non-athletic medical expenses could positively impact institutional budgets. By seeking to reduce expenses in these services through numerous cost reduction strategies, greater concierge-type access may also result. Of note, the most common

strategies to reduce overall costs (identified in RQ4 as direct contractual relationships, informal agreements for reductions of costs for services and goods and employing/contracting medical providers) could impact each of the most commonly utilized non-athletic services and could reduce this loss exposure.

RQ3: What are the policies utilized by institutions of higher education in the management of medical care expenses? What effect do policies have on medical expenses (if any)? Research question 3 sought to identify what policy choices institutions make to satisfy legislated requirements for student-athlete athletic injury coverage and what effect these policies have on medical expenses if any. This study failed to show significance in effects or relationships between policies and medical expenses. This study investigated the policies related to the NCAA policy on primary insurance requirements and institutional choice for coverage of expenses up to the NCAA deductible.

The two most commonly utilized methods for satisfying the NCAA policy on insurance coverage for student-athletes included utilizing a student-athlete's policy when available/if none the institution becomes primary and institutional self-insurance for athletic related medical expenses (institutions may use more than one method to satisfy the requirement). A best practice measure that could assist in reducing the exposure occurs when institutions verify the student-athletes' policies were active, which occurred in 86.2% (25/29) of responding institutions. As policy, only 8/29 or 27.6% of responding institutions required all student-athletes to have personal active primary insurance or coverage for medical expenses related to athletic injury. As the student-athlete's policy could serve as primary and reduce total expenses which fall to the institution, utilizing this method may provide additional protection against loss by the institution and reduce the impact assumed by institutional budgets.

Those institutions which did not require all student-athletes have personal active primary insurance or coverage for medical expenses related to athletic injury (21/29 or 82.8%) may experience greater exposure to loss by assuming greater portions of medical claims serving as the student-athlete's primary policy. By becoming primary (when no personal policy is available) and self-insuring, the institutions chose to assume greater exposure to the risk of financial loss. If the institution had been tracking the losses and that data revealed this retention was in institution's best interest, effective risk management occurred. As participants in this study were members of the wealthiest institutions in the NCAA Division I FBS, these institutions may have been in the position to allow greater financial risk than institutions with less fiscal resources. With continued calls for fiscal responsibility and cost containment, administrators should seek to demonstrate fiscal responsibility while managing their respective institution's policy.

In cases where the student-athlete has no individual policy for athletic injuries and the institution elects to cover these expenses out of pocket, proactive programing could have substantial impacts. Athletic departments may opt to purchase individual or group policies with greater available benefits. As athletic departments may elect to use some variation of self-funding to cover student-athlete medical expenses, the fixed price or direct pay models may inspire athletic departments to develop direct pay relationships with provider for desired care and services. With convenient time frames and reduced, pre-determined fees to the department for care, such arrangements could create a concierge network with financial benefits to the institution and the providers. By removing the hassle of insurance company negotiation and the time it can take providers and facilities to achieve reimbursement, athletic departments could see cost savings.

Responses on choice of institutional coverage for costs up to the NCAA deductible showed the more common practices from institutions in this study were utilizing self-insurance (61.3%) and other commercial policies (58.1%) (of note, institutions may use more than one method for institutional coverage). The range of premiums reported for commercial policies was vast, as was the range of deductibles. Electing larger deductibles typically reduces premiums but increases the institution's financial loss exposure before policy benefits become available. By identifying and tracking trends in cases of athletic injury, institutions could weigh the premium cost against the risk of financial losses from medical expenses and base the institution's financial planning decisions in objective data. For commercial policies, institutional administrators should review multiple years of loss data, including an evaluation of the deductible and those cases of athletic injury which come close to or exceed the deductible to evaluate the best deductible-premium balance. The choice of raising the deductible on the commercial plan could result in premium savings though doing so without considering the expense data could result in large financial losses within a fiscal year. Few institutions in this study purchased the NCAA Group Accident Medical Program Plan; NCAA administrators may wish to investigate the coverage terms and conditions of commercial plans and determine what makes those plans attractive over the NCAA Group Accident Medical Program Plan.

Forming consortiums for buying, such as by conference, to increase purchasing power for various types of insurance coverage to assist in cost reduction is a challenging yet possible option. Such programs would require compromise within the consortium and determination of what policy coverages would benefit the group. Forming captives or buying consortia to purchase commercial insurance for a group of institutions (for example, within a conference) has potential fiscal advantages, but could lead to challenges in choice of medical management and

would require compromise. Policies and procedures on which services participating institutions elect to cover would need to align for this approach to be successful. Although the NCAA legislates standardization of care and coverage, the method individual institutions use to meet the requirement remains discretionary.

Institutions must decide how to manage the NCAA requirement for insurance coverage up to the NCAA Catastrophic Injury Insurance Program deductible. With several common approaches, evaluating the loss trends over time with the risk financing plan of the institution in mind would result in an educated approach. As these losses should be monitored over time, continued reevaluation and plan modification could result in savings to the institution.

RQ4: What are the medical expenses coordination and management strategies utilized by institutions of higher education in the management of medical care expenses? What effect do strategies have on medical expenses (if any)? Research question 4 sought to understand common strategies institutions used to manage medical expenses and what effect strategies had on medical expenses if any. This study failed to show significance in effects or relationships between strategies and medical expenses. This study investigated the strategies used by institutions in the management of medical expenses.

Most responding institutions employed an insurance coordinator within the athletic department (75.8% or 22/29), revealing recognition of the importance of coordinating and managing medical claims by athletic departments. In addition, no responding institutions used the student health center or institutional administrators to coordinate and manage medical claims; this may be due to the preference of keeping management within the department to cultivate concierge service and quick access to claim status and information. All institutions utilized some strategy to reduce costs, with relationships (contractual or informal) between institution and

facilities/providers and employing/contracting medical providers being the most common. Most commonly employed/contracted providers included nutritionist/registered dieticians, physical therapist(s), chiropractor(s), physicians(s), and mental health professional(s) – all at above 75%. Although bringing its own controversy with the growth in athletic department staffs, employing a larger range of medical providers within the athletic department or institution could assist in reducing the medical care expenditures for student-athletes. Each layer adds complexity and responsibility to the relationship between student-athletes and the institutions while attempting to reduce the time and costs associated with outside providers. The additional staff continues the trend of growing staffs within athletic departments and institutions would assume greater costs in salaries and benefits. The potential benefits of employing providers must be compared to the increased costs and potential increased liability the employer may assume. Such additional employees could range from physicians to clinical psychologists depending on what services individual institutions chose to provide. Growth of staff may not be financially possible at all institutions.

Few (12.9%) used consortial purchasing practices. As this collective approach calls for collaboration and compromise, individual institutional loss of control may make this a less attractive option for some athletic departments. The benefits and cost savings made possible through collaboration must be weighed against the loss of control for institutions to determine the viability of this option. With commonality of resources, competitive environments, and the need to identify impactful cost saving approaches to managing expenses, consortiums may prove fiscally advantageous.

Individual institutional contracts or agreements with frequently used providers or facilities to reduce cost could produce savings. Contracting with management firms and utilizing

Third Party Administrators (TPAs) to negotiate and pay medical claims for the institutions are avenues to assist in management of financial loss associated with medical costs. As athletic departments operate within higher education institutions, defining these types of relationships through contractual obligations can be complicated by the rules and regulations of state regulated institutional finance but not impossible. These approaches may challenge long standing relationships within the communities housing collegiate athletic programs or conflict with other established institutional contracts or agreements. Prudent administrators must evaluate the benefits and drawbacks associated with all aspects of such agreements to arrive at the most fiscally and medically beneficial relationships. Ongoing and objective evaluation is required of responsible and effective management.

Recommendations for Future Study

Future research in this area should assess actual expense verses the ranges of expenses collected in this study. By doing so, it may be possible to reveal relationships between expenses and the policies and strategies institutions used in medical expense management. Additionally, assessing these expenses over time allows development of trends in spending and determines the most advantageous institutional plan of action. By identifying where and on what spending is occurring, interventions could be developed and implemented to address these expenses. Furthermore, by understanding what services compose each category of expenses and what drives use of services, administration could evaluate current practices and forecast what the department needs to more effectively address cost containment in the future, resulting in objectively forecasted best practices.

By comparing the expenses of those institutions requiring the student-athlete to have an active personal individual policy for use in athletic related injury medical claims to those

institutions that do not enforce this requirement, administrators may be provided a picture of the impact of this choice on institutional budgets. Although other factors do influence this comparison, such as the benefits and cost sharing measures applicable to each individual insurance policy, assessing these relationships within a larger sample may guide informed decisions on requiring the student-athlete to have a primary insurance policy. This measure requires no financial outlay by the institution.

For strategies to manage expenses, future study should investigate the qualifications of the professionals managing medical expenses in college athletics and identify the training/education leading to effective cost containment. This study did not investigate the qualifications or education of the person(s) serving in this role and that is an area of future study, possibly in comparison to the insurance industry's TPA. Institutional administrators and market professionals may then be able to assess if utilizing an outside agency to manage all medical expense claims would benefit the institutions. Outside agencies and TPAs might have greater access to claims reducing networks that could result in significant reductions in both athletic and non-athletic expenses.

Due to the complexity of healthcare insurance and higher education athletic management and finance coupled with NCAA regulations, institutional case studies may prove a prudent approach. By analyzing case studies over time, the results may provide the greatest opportunities to understand what expenses are assumed by institutions, what policies and strategies institutions utilized in managing those expenses, and the extent of success of those interventions. By providing these studies across multiple years, parties could define best practices with greater confidence.

Conclusion

The research in the area of financial management of medical expenses for student-athletes in institutions of higher education is extremely limited. One must glean information from a variety of disciplines and assemble the information in approaching this topic. This study was the first of its kind in that it identified expenses, although in ranges, applied to institutional budgets for medical care of student-athletes; no such data has been made public. In addition, it identified common policies and strategies used by these departments in management of these expenses.

By examining the practices within institutions of similar financial resources and competitive fields, common themes may emerge that lend to development standardization of best practices. In addition, as commonality in policy and practice was identified, measures to form collective approaches such as buying consortiums, group purchasing practices, or conference wide policies could allow for expansions on coverage against loss while reducing costs to the institutions. It must be acknowledged that with collaborative policies and management, some control over aspects of the plans would be sacrificed. The institutions must weigh that loss against possible gains in costs savings to determine the feasibility of these options. Market professionals in risk and insurance could produce better products for availability when the trends and needs of this evolving market are known and understood. In addition, these professionals could lend expertise in developing custom plans and policies to better serve this niche of the population and advising administration as management practices require adaptation. Athletic departments are utilizing strategies to reduce expenses that are common across the insurance and risk management market. What is unknown is the effect that each strategy, or combination thereof, has on the expense.

Summary

Managing the medical expenses in institutions of higher education for student-athletes has become increasingly complicated by health care evolution, the insurance market, and higher education institutional and athletic department finance. The process has been further complicated by the medical management required to ensure health and safety in this arena and how that is best, most efficiently, and most economically provided. To proactively plan in an effective manner, policies and strategies must align with the institutional needs and resources, while considering the constant evolution of risk, risk management, insurance, health care, and medical care of the student-athlete.

Proactive institutions will develop strategies and policies to assist in mitigating the increased cost of medical care for student-athletes. Athletic department administrators must learn and lean on risk and insurance management professionals and the medical care providers to discover and develop the best practices for care of the student-athlete and to discover methods to mitigate financial losses for student-athletes' medical expenses. This includes developing and monitoring policies and strategies, understanding how and where the expenses are impacting institutional budgets, and using those trends and information to develop plans and interventions throughout the ongoing process.

References

- Association for the Study of Higher Education (2015). The NCAA Division I Athletic Funding Crisis. *Higher Education Report*, 41(5), 25-47.
- Barr, C. (1999). *History of Faculty Involvement in College Athletics*. NCAA. Retrieved from http://www.ncaa.org/sites/default/files/History+of+Faculty+Involvement_final.pdf
- Baranoff, E.G., Harrington, S. E., & Niehaus, G.R. (2005). *Risk Assessment*. Malvern, Pennsylvania: American Institute for Charter Property Causality Underwriters/Insurance Institute of America.
- Berkowitz, S., Upton, J. & Brady, E. (2013). Most NCAA Division I athletic departments take subsidies. *USA Today*. Retrieved from <http://www.usatoday.com/story/sports/college/2013/05/07/ncaa-finances-subsidies/2142443/>.
- Berkowitz, S., & Schnaars, C. (2017a,). College are spending more on their athletes because they can. *USA Today*. Retrieved from <http://www.usatoday.com/story/sports/college/2017/07/06/colleges-spending-more-their-athletes-because-they-can/449433001/>.
- Berkowitz, S. & Schnaars, C. (2017b). Schools' money flows to athletes: Cost of changes in attendance rules create new game. *USA Today*. Retrieved from <http://eds.b.ebscohost.com.spot.lib.auburn.edu/ehost/detail/detail?vid=3&sid=490fa3ed-d6b5-4b9b-a5c4-14d5b3872d3d%40pdc-v-sessmgr01&bdata=JnNpdGU9ZWwhvc3QtbGl2ZQ%3d%3d#db=aph&AN=J0E051799858517>.
- Brady, E., Berkowitz, S., & Schnaars, C. (2015). College athletics finance report: Non-Power 5 schools face huge money pressure. *USA Today*. Retrieved from <http://www.usatoday.com/story/sports/college/2015/05/26/ncaa-athletic-finances-revenue-expense-division-i/27971457/>.

- Brady, E., Berkowitz, S., & Upton, J. (2016). Can college athletics continue to spend like this? *USA Today*. Retrieved from <https://www.usatoday.com/story/sports/college/2016/04/17/ncaa-football-basketball-power-five-revenue-expenses/83035862/>.
- Braverman, B. (2018). Should You Sign Your Student Up for a College Health Insurance Plan? *Consumer Reports*. Retrieved from: <http://www.consumerreports.org/health-insurance/should-you-sign-up-for-college-health-insurance-plan/>.
- Burnsed, B. (2014). *Growth in Division I athletic expenses outpaces revenue increases*. (NCAA Research Report) Retrieved from <http://www.ncaa.org/about/resources/media-center/news/growth-division-i-athletics-expenses-outpaces-revenue-increases>.
- Burnsed, B. (2015). *Athletic departments that make more than they spend still a minority*. (NCAA Research Report) Retrieved from <http://www.ncaa.org/about/resources/media-center/news/athletics-departments-make-more-they-spend-still-minority>.
- Burnsed, B. (2016). *Survey: Most DI schools provide injury coverage: Results show few out-of-pocket expenses for DI student-athletes*. (NCAA Research Report). Retrieved from <http://www.ncaa.org/about/resources/media-center/news/survey-most-di-schools-provide-injury-coverage>.
- Burtlag Hosick, M. (2015). *Autonomy Schools adopt cost of attendance scholarships. College athletes' viewpoints dominate business session discussions*. (NCAA Research Report). Retrieved from <http://www.ncaa.org/about/resources/media-center/autonomy-schools-adopt-cost-attendance-scholarships>.
- Burtlag Hosick, M. (2018). *Autonomy conferences adopt medical care proposal. Student-athletes support proposal that mandates expanded coverage*. (NCAA Research Report).

Retrieved from <http://www.ncaa.org/about/resources/media-center/news/autonomy-conferences-adopt-medical-care-proposal>.

Centers for Medicare and Medicaid Services. (2014). *From Coverage to Care: A Roadmap to Better Care and a Healthier You*. (CMS Product No. 11839). Retrieved from <http://marketplace.cms.gov/technical-assistance-resources/c2c-roadmap.pdf>

Center for Medicare and Medicaid Services. (2017). *Out-of-Pocket Spending by Gender and Age Group, Calendar Years 2002-2012*. Baltimore, MD: Author. Retrieved from CMS <http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/Age-and-Gender.html>

Center for Medicare and Medicaid Services (2018) *NHE Fact Sheet*. Baltimore, MD: Author. Retrieved from <http://www.cms.gov/research-statistics-data-and-systems/statistics-trends-and-reports/nationalhealthexpenddata/nhe-fact-sheet.html>.

Claxton, G. (2002). *How Private Insurance Works: A Primer*. Retrieved from <https://kaiserfamilyfoundation.files.wordpress.com/2013/01/how-private-insurance-works-a-primer-report.pdf>.

Claxton, G., Sawyer, C. & Cox, C. (2019). How does cost affect access to care? *Peterson-Kaiser Health System Tracker*. Retrieved from <http://www.healthsystemtracker.org/chart-collection/cost-affect-access-care/>.

Cohen, R., Zammitti, E., & Martinez, M. (2017). *Health insurance coverage: Early release of estimates from the National Health Interview Survey, 2016*. Washington, DC: U.S Department of Health and Human Services, National Center for Health Statistics. Retrieved from <http://www.cdc.gov/nchs/data/nhis/earlyrelease/insur201705.pdf>.

- Cohen, R., Zammitti, E., Martinez, M. (2018). *Health insurance coverage: Early release of estimates from the National Health Interview Survey, 2017*. Washington, DC: U.S Department of Health and Human Services National Center for Health Statistics. Retrieved from <http://www.cdc.gov/nchs/data/nhis/earlyrelease/insur201805.pdf>.
- Descrochers, D. (2013). *Academic Spending versus Athletic Spending: Who Wins?* Issue Brief. Washington, DC: American Institutes for Research. Retrieved from <http://www.air.org/resource/academic-spending-vs-athletic-spending-who-wins>.
- Edwards, H.S. (2017, January). What happens when doctors only take cash. *Time*, p 35-37
- Elliot, M.W. (Ed.). (2012). *Risk Financing*. Malvern, PA: The Institutes.
- Evans, M., & Fleming, K. (2017, June). What we can all do about rising healthcare costs. *Forbes*. Retrieved from <https://www.forbes.com/sites/allbusiness/2017/06/28/what-we-can-all-do-about-rising-healthcare-costs/#618746be2f37>.
- Fain, P. (2010). With sports insurance, West Virginia U. takes care of its injured hoops hero. *Chronicle of Higher Education*. ppA16.
- Gaines, C. (2015, October 13). The 25 schools that make the most money in college sports. *Business Insider*. Retrieved from <http://www.businessinsider.com/schools-most-revenue-college-sports-2016-10/#25-ucla-969-million-1>
- Goodnough, A. & Pear, R. (2018, December). Texas judge strikes down Obama's Affordable Care Act as unconstitutional. *New York Times*. Retrieved from <http://www.nytimes.com/2018/12/14/health/obamacare-unconstitutional-texas-judge.html>.
- Gupta, N. & Polsky, D. (2012). High deductible health plans: does cost sharing stimulate increased consumer sophistication? *Health Expectations*, 18, 335-343. doi:10.1111/hex.12031.

- Hamel, L., Norton, M., Pollitz, K., Levitt, L., Claxton, G., & Brodie, M. (2016, January). *The burden of medical debt: Results from the Kaiser Family Foundation / New York Times Medical Bills Survey*. Retrieved from <http://www.kff.org/report-section/the-burden-of-medical-debt-introduction/>.
- Hartman, M., Martin, A.B., Espinosa, N., Catlin, A. and The National Health Expenditure Accounts Team. (2018). National health care spending in 2016: Spending and enrollment growth slow after initial coverage expansions. *Health Affairs*, 37(1):150-160. doi:10.377/hlthaff.2017.1299.
- Hobson, W., & Rich, S. (2015, November). Playing in the red: Big-time college athletic departments are taking in more money than ever – and spending it just as fast. These 28 schools operated at a loss in 2014. *Washington Post*. Retrieved from http://www.washingtonpost.com/sf/sports/wp/2015/11/23/running-up-the-bills/?utm_term=.070729afe97d.
- Hodge, F. & Tanlu, L. (2009). Finances and college athletics. *New Directions for Institutional Research*, 144, 7-18. doi:10.1002/ir.309.
- Kaiser Family Foundation (2017a). *Payments for cost sharing increasing rapidly over time*. San Francisco, CA: Author Retrieved from <http://www.kff.org/health-costs/issue-brief/payments-for-cost-sharing-increasing-rapidly-over-time/>.
- Kaiser Family Foundation (2017b). *Premiums for employer-sponsored family health coverage rise slowly for the sixth straight year, up 3% but averaging \$18,764 in 2017*. San Francisco, CA: Author. Retrieved from <http://www.kff.org/health-costs/press-release/premiums-for-employer-sponsored-family-health-coverage-rise-slowly-for-sixth-straight-year-up-3-but-averaging-18764-in-2017/>.

- Kaiser Family Foundation (2018a). *Key facts about the uninsured population*. San Francisco, CA: Author. Retrieved from <http://www.kff.org/uninsured/fact-sheet/key-facts-about-the-uninsured-population/>
- Kaiser Family Foundation (2018b). *Potential impact of Texas v. US decision on key provisions of the Affordable Care Act*. San Francisco, CA: Author. Retrieved from <http://www.kff.org/health-reform/fact-sheet/potential-impact-of-texas-v-u-s-decision-on-key-provisions-of-the-affordable-care-act/>.
- Killinger, T.P. & Schelhase, K.C. (2018). Medical claims at National Collegiate Athletic Association institutions: The athletic trainer's role. *Journal of Athletic Training*, 53(10), 1004-1010.
- Lassman, D., Hartman, M., Washington, B., Andrews, K., & Caitlin, A. (2014). US health spending trends by age and gender: Selected years 2002-2010. *Health Affairs*, 33(5), 815-822. doi:10.1377/hlthaff.2013.1224.
- Lee, C. (2018). *If the Affordable Care Act is struck down, nearly all Americans will be affected in some way*. San Francisco, CA: Kaiser Family Foundation. Retrieved from <http://www.kff.org/health-reform/press-release/if-the-affordable-care-act-is-struck-down-nearly-all-americans-would-be-affected-in-some-way/>.
- Luthardt, C.M., Smith, B.D., & Wienen, E.A. (1999). Insurance: What is it? In Quay, C.O. (Ed.). *Property and Liability Insurance Principles (3rd Ed)* (pp. 1-26). Malvern, Pennsylvania: Insurance Institute of America.
- Malecki, D.S. & Flitner, A.L. (1998). *Commercial Liability Insurance and Risk Management*. [4th Ed.]. Malvern, Pennsylvania: American Institute of CPCU.

- Marot, M. (2018, January). Power five conferences approve medical benefits extension. *U.S. News & World Report*. Retrieved from <http://www.usnews.com/news/news/articles/2018-01-19/power-five-conferences-approve-medical-benefits-extension>.
- McCune, C. (2013, April). NCAA policies for student-athlete medical insurance breakdown. *Bleacher Report*. Retrieved from <http://bleacherreport.com/articles/1595326-ncaa-policies-for-student-athlete-medical-insurance-breakdown>.
- McMorrow, S., Kenney, G.M., Long, S.K., & Anderson, N. (2015). Uninsurance among young adults continues to decline, particularly in Medicaid expansion states. *Health Affairs*, 34(4), 616-620. Retrieved from <http://dx.doi.org/10.1377/hlthaff.2015.0044>
- National Collegiate Athletic Association. (2011). *Overview of Legislation*. Indianapolis, IN: Author. Retrieved from http://www.ncaa.org/sites/default/files/Overview_of_Legislation.pdf
- National Collegiate Athletic Association (2016). *NCAA Division I student-athlete insurance coverage: Overall findings – February 2016*. Indianapolis, IN: Author. Retrieved from http://www.ncaa.org/sites/default/files/2016DI-SA-Insurance-Survey_20160525.pdf.
- National Collegiate Athletic Association (2017a). *Division I Proposal: Autonomy proposal – awards, benefits, and expenses – medical expenses – medical coverage*. Indianapolis, IN: Author. Retrieved from <https://web3.ncaa.org/lstdbi/search/proposalView?id=101792>
- National Collegiate Athletic Association (2017b). *2017-2018 NCAA Division I Manual*. Indianapolis, IN: Author. Retrieved from <http://www.ncaapublications.com/p-4511-2017-2018-ncaa-division-i-manual-august-version-available-august-2017.aspx>.

- National Collegiate Athletic Association (2018a). *Effective Practices for managing student-athlete insurance*. Indianapolis, IN: Author. Retrieved from http://www.ncaa.org/sites/default/files/2018INS_NCAA_Effective_Practice_Document_20180531.pdf
- National Collegiate Athletic Association (2018b). *NCAA catastrophic injury insurance program frequently asked questions*. Indianapolis, IN: Author. Retrieved from http://www.ncaa.org/sites/default/files/2018_Cat%20FAQs_20180105.pdf.
- National Collegiate Athletic Association (2018c). *Basic Accident Insurance 101 – Terminology*. Indianapolis, IN: Author. Retrieved from http://www.ncaa.org/sites/default/files/2018INS_Basic_Accident_Insurance_101_20180531.pdf
- National Collegiate Athletic Association (2019) *Division I*. Indianapolis, IN: Author. Retrieved from <http://www.ncaa.org/about?division=d1>.
- Palosky, C. & Ducat, S. (2015). *Employer family health premiums rise 4% to \$17,545 in 2015, extending a decade-long trend of relatively moderate increases*. San Francisco, CA: Kaiser Family Foundation. Retrieved from <http://www.kff.org/health-costs/press-release/employer-family-health-premiums-rise-4-percent-to-17545-in-2015-extending-a-decade-long-trend-of-relatively-moderate-increases/>.
- Paloski, C. & Ducat, S. (2016). *Average annual workplace family health premiums rise modest 3% to \$18, 142 in 2016; More workers enroll in high-deductible plans with savings option over past two years*. San Francisco, CA: Kaiser Family Foundation. Retrieved from www.kff.org/health-costs/press-release/average-annual-workplace-family-health-premiums-rise-modest-3-to-18142-in-2016-more-workers-enroll-in-high-deductible-plans-with-savings-option-over-past-two-years/#

- Richman, I. & Brodie, M. (2014). A national study of burdensome health care costs among non-elderly Americans. *BMC Health Services Research* 2014, 14(1): 435-446. Retrieved from <http://www.biomedcentral.com/1472-6963/14/435>.
- Rosata, D. (2016). How to survive a high-deductible health plan. *Consumer Reports*. Retrieved from <http://www.consumerreports.org/health-insurance/high-deductible-health-plan/>
- Rosato, D. (2018). What a new challenge to the ACA means for your health insurance costs. *Consumer Reports*. Retrieved from <http://www.consumerreports.org/health-insurance/what-new-challenge-to-aca-means-for-health-insurance-costs/>
- Sawyer, B., Cox, C, & Claxton, G. (2017). *An analysis of who is most at risk for high out-of-pocket health spending*. San Francisco, CA: Kaiser Family Foundation. Retrieved from <http://www.healthsystemtracker.org/brief/who-is-most-at-risk-for-high-out-of-pocket-health-spending/#item-start>.
- Schrotenboer, B., Berkowitz, S. & Schnaars, C. (2018, June). Is overspending catching up to these Power 5 schools? *USA Today*. Retrieved from <https://www.usatoday.com/story/sports/ncaaf/2018/06/28/college-football-overspending-catching-up-these-big-time-schools/736222002/>.
- Solomon, J. (2012, February). College athletes' rights: NCAA requires health insurance, but schools decide what to pay [Web BLOG]. Retrieved from http://www.al.com/sports/index.ssf/2012/02/college_athletes_rights_ncaa_r.html
- Torpy, J.M., Burke, A.E., & Glass, R.M. (2007). Health care insurance: The basics. *Journal of the American Medical Association (JAMA)*, 297(10): 1154. doi10.1001/jama.297.10.1154

USA Today Sports (2017a) Methodology for 2016 NCAA athletic department revenue database.

USA Today. Retrieved from <http://sports.usatoday.com/2017/07/06/methodology-for-2016-ncaa-athletic-department-revenue-database/>.

USA Today Sports (2017b). NCAA finances: 2016-17 Finances. *USA Today*. Retrieved from <http://sports.usatoday.com/ncaa/finances/>

Waters, T.M., Chang, C. F. Cecil, W.T., Kasteridis, P. & Mirvis, D. (2011). Impact of High-Deductible Health Plans on Health Care Utilization and Costs. *Health Services Research, Health Research and Education Trust*, 46(1), 155-172.
doi10.1111/j.14756773.2010.01191.x.

Wolken, D. (2014, May). Focus falls on full cost of attendance. *USA Today*, p. 6. Retrieved from <https://www.pressreader.com/usa/usa-today-us-edition/20140508/283712657426630>.

Wolverton, B. (2015). New benefits for athletes trigger talk of cutbacks in college sports. *Chronicle of Higher Education*. pp. A12-A14

Wolverton, B. & Kambhampati, S. (2015). New Aid Allowances Raise Questions of Fairness in Athletics. *Chronicle of Higher Education*, pp A12.

Yahn, S. (2014, July). The high cost of insuring student athletes. *Risk & Insurance*. Retrieved from <http://riskandinsurance.com/high-cost-insuring-student-athletes/>.

Appendix A
Survey Instrument

**Financial Management of Medical Care of Intercollegiate Student-Athletes
in Institutions of Higher Education**

The following survey is to gain insight into the financial issues associated with medical care of intercollegiate student-athletes and the current administrative policies, practices, and strategies that impact higher education institutional finance for the medical care of these student-athletes.

Directions:

The purpose of this study is to assess and compare student-athlete medical care expenses and their management among higher education institutions. You are being sent this survey because you have been identified as the person at your institution who manages/coordinates the management of medical care expenses. In addition, this study aims to assess the methods institutions are using through policy, practices, and administration to manage the financial loss experienced by the institution for medical care of student-athletes. The following questions refer to the **most recently concluded fiscal year** (12 month period July 1, 2016 – June 30, 2017) and **institutional budgetary funds**. Please indicate your responses by filling in the blank or selecting the appropriate response from options when provided. This survey should take approximately 20-30 minutes to complete. There are no perceived risks associated with completing this survey. To further protect your privacy and ensure your confidentiality, all results will be summarized and reported in aggregate form.

Demographics:

1-6. Conference:

- Atlantic Coast Conference (ACC) – Including Norte Dame- Institution
- Big Ten Conference (B1G) Institution
- Big 12 Conference Institution
- Pac-12 (Pac-12) Conference Institution
- Southeastern Conference SEC) Institution

Institution: (Based on selection to the Conference question above, the selected conference member institution list only appears)

7. Division:

- NCAA Division I FBS (for this study, this selected was pre-selected)
- NCAA Division I FCS
- NCAA Division II
- NCAA Division III

8. Number of Intercollegiate sports teams at your institution: _____

9. Number of Student-Athletes: _____

Medical Care Administration/Assessment of Medical Expenses/Costs

10. Does your institution pay any and all of the medical expenses that result from athletic participation/covered events that are not covered by any other insurance for student-athletes (i.e. the student-athlete pays no out of pocket costs for athletic injury care)?

- Yes
- No

11. If no, please describe under what circumstances a student-athlete's medical expense resulting from athletic participation/covered events would not be covered (i.e. the student-athlete would pay some/all amount(s) out of pocket costs for athletic injury care)?:

12. Does your institution pay for medical care for student-athletes that result from incidences other than athletic team participation/covered events?

- Yes
- No

If "YES" selected to "Does your institution pay for medical care for student-athletes that result from incidences other than athletic team participation/covered events?" this will appear:

13. When considering medical care for student-athletes that result from incidences other than athletic team participation/covered events, please select those services the institution may choose to pay for (select all that apply):

- Illness not directly related to athletic participation
- Dental care
- Vision care/products
- Psychological/counseling/mental health services
- Substance addiction/abuse services
- Preventative/general health services
- Athletic clearance related services (evaluations occurring prior to successful completion of pre-participation physical)
- Medications/prescriptions
- Orthopedic injuries (occurring in events other than team/athletic department supervised physical activities/covered events)
- Injuries occurring in events other than team (non-orthopedic)

- Durable medical equipment (i.e braces, orthotics, prophylactic devices, etc)
- Other (Please explain): _____

14. If “Durable medical equipment” is selected above:

Are these purchases made in manner linked to and represented in medical care expenses or are institutional supply funds used?

- Medical Care Expenses
- Institutional Supply Funds
- Both medical care expenses and institutional supply funds are used

Assessment of Medical Expenses/Costs

When considering the upcoming series of questions on expenses, please report as medical care expenses only those sums which were **paid out from athletic departmental budgets to/for medical and allied health providers for student-athlete medical care**; please do not consider any costs of insurance/premiums, any human resources/employee benefits costs, administrative costs, or sums paid from other sources/budgets for medical care.

15. What was your institution’s annual overall medical care expense for student-athletes (include athletic and non-athletic expenses if applicable)?

- Less than \$25,000
- \$25,001-\$50,000
- \$50,001-\$100,000
- \$100,001-\$150,000
- \$150,001-\$200,000
- \$200,001-\$250,000
- \$250,001-\$300,000
- \$300,001-\$350,000
- \$350,001-\$400,000
- \$400,001-\$450,000
- \$450,001-\$500,000
- \$500,001 and up

16. What was your institution's annual medical care expense for **athletic injury/illness (medical care resulting from institutionally sanctioned athletic activities/covered events)** care for student-athletes?

- Less than \$25,000
- \$25,001-\$50,000
- \$50,001-\$100,000
- \$100,001-\$150,000
- \$150,001-\$200,000
- \$200,001-\$250,000
- \$250,001-\$300,000
- \$300,001-\$350,000
- \$350,001-\$400,000
- \$400,001-\$450,000
- \$450,001-\$500,000
- \$500,001 and up
- Institution does not have information available

If "yes" was selected to the question "Does your institution pay for medical care for student-athletes that result from incidences other than athletic team participation/covered events?" the below question will appear:

17. What was your institution's annual medical care **expense for illness /injury medical care not resulting from institutionally sanctioned athletic injury/covered events** (ie sickness, preventative care, emergency, mental health, etc.) for student-athletes?

- Less than \$25,000
- \$25,001-\$50,000
- \$50,001-\$100,000
- \$100,001-\$150,000
- \$150,001-\$200,000
- \$200,001-\$250,000
- \$250,001-\$300,000
- \$300,001-\$350,000
- \$350,001-\$400,000
- \$400,001-\$450,000
- \$450,001-\$500,000
- \$500,001 and up
- Institution does not have information available
- My institution does not pay these types of medical claims (*if this response is selected, some subsequent questions may not appear*)

Policy on Primary Insurance:

NCAA member institutions are required to verify student-athletes have insurance coverage for medical expenses resulting from athletically related injuries before the student-athlete can play or practice. This coverage may result from a parent/guardian policy, a personal policy for the student-athlete, or the institution.

18. How does your institution satisfy this requirement (choose all that apply)?

- Student-athlete is required to provide evidence of coverage (through individual, parent, or guardian policy) for use as primary
- Student-athlete's own coverage/policy (individual, parent, or guardian) is utilized if available but not required; if student-athlete has no coverage, the institution/institution's policy becomes primary
- Institution purchases individual policy for student-athlete with intercollegiate athletic injury coverage benefits
- Institution self-insures (i.e pays "out of pocket"/from institutional funds) for medical expenses resulting from athletically related injuries
- Other (please explain): _____

19. Does your institution require all student-athletes to have a personal active primary insurance/coverage for medical expenses related to athletic injuries?

- Yes
- No

If "Yes" is selected "Does your institution require all student-athletes to have a personal active primary insurance/coverage for medical expenses related to athletic injuries?", this will appear:

20. Does your institution verify the student-athletes' personal policy are active?

- Yes
- No

If "YES" is selected to "Does your institution verify the student-athletes' personal policy are active?" this will appear:

21. Your institution verifies the student-athletes' coverage are active by:

- Outside agency/contracted entity completes verification
- Staff completes verification

Policy on Institution Coverage:

NCAA member institutions are provided coverage under the NCAA Catastrophic Injury Insurance Policy after this policy's \$90,000 deductible is met (* For members participating in the NCAA Group Accident Medical Program the deductible is \$75,000).

22. What method does your institution use to cover expenses up to the NCAA Catastrophic Injury deductible (select all that apply)?

- Purchase the NCAA Group Accident Medical Program Plan
- Purchase other commercial insurance policy
- Self-Insure (pay "out of pocket"/institutional budget) for medical costs
- Require student-athlete to provide coverage for expenses

If "Purchase other commercial insurance policy " is selected above, this will appear:

23. What type of insurance plan does your institution purchase?

- Fully insured (Claim is eligible for filing after the deductible is met for each occurrence/injury)
- Aggregate (claim is eligible for filing once the institution has paid a specified amount for all claims)
- Captives (Institution owned and controlled insurance company) or other Risk Pooling Methods
- Other – please explain: _____

If "Purchase other commercial insurance policy " is selected above, this will appear:

24. What is the annual premium for the portion of the policy that covers medical costs up to the NCAA deductible?

- Under \$50,000
- \$50,001-\$100,000
- \$100,001-\$150,000
- \$150,001-\$200,000
- \$200,001-\$250,000
- \$250,001-\$300,000
- \$300,001-\$350,000
- \$350,001-\$400,000
- \$400,001-\$450,000
- \$450,001-\$500,000
- Above \$500,000

If “fully insured” is selected regarding commercial policy, this will appear:

25. What is the deductible?

- Below \$1,000
- \$1,001-\$2,500
- \$2,501-\$5,000
- \$5,001-\$10,000
- \$10,001-\$15,000
- \$15,001-\$20,000
- \$20,001-\$25,000
- \$25,001-\$30,000
- \$30,001-\$35,000
- \$35,001-\$40,000
- \$40,001-\$45,000
- \$45,001-\$50,000
- Above \$50,000

If “Aggregate (claim is eligible for filing once the institution has paid a specified amount for all claims) “is selected above, this will appear:

26. What is the Aggregate Attachment Point/Deductible (i.e. what is the specified amount to be paid out by institution for policy to come into play)?

- \$100,000 or below
- \$100,000-\$150,000
- \$150,000-\$200,000
- \$200,000-\$250,000
- \$250,000-\$300,000
- \$300,000-\$350,000
- \$350,000-\$400,000
- \$400,000-\$450,000
- \$450,000-\$500,000
- Above \$500,000

Strategies on Managing Medical Expense Claims

27. What personnel at your institution is/are responsible for coordinating the management of claims related to medical care for student-athletes?

- Athletic training/sports medicine staff with other responsibilities
- Athletic training/sports medicine staff's primary responsibility
- Multiple staff positions within institution handle this responsibility
- Insurance coordinator
- Institutional administrator
- Student Health Center
- Other (please explain) : _____

28. What (if any) strategies does your institution employ to attempt to mitigate/reduce overall costs of medical claims (select all that apply):

- None
- Utilization of TPA (third party administrator) for claims management/reductions
- Direct contractual relationships between institution and medical facilities/providers used by student-athletes
- Informal agreements for reduction of cost for services/goods with medical providers used by student-athletes
- Consortial purchasing practices
- Purchase of private individual policy with coverage benefits for a student-athlete without primary insurance
- Employing/Contracting medical providers within the athletic department to provide medical services
- Other (please explain): _____

If "Utilization of TPA (third party administrator) for claims management/reductions" is selected, this will appear:

29. Cost of this service: _____

If "Purchase of private individual policy with coverage benefits for a student-athlete without primary insurance" is selected, this will appear:

30. Does policy cover intercollegiate athletic injuries?

- Yes
- No

31. Premium per student-athlete: _____

32. Number of student-athletes policy was purchased for during the applicable fiscal year: _____

33. Demographics of student-athlete policy purchased for (select all that apply);

- Scholarship
- International
- Case by case
- Sport
- Other (please explain) : _____

If “Employing/Contracting medical providers within the athletic department to provide medical services

“is selected, this will appear:

34. If “Employing/Contracting medical providers within the athletic department to provide medical services

“is selected, then (select all that apply):

- Institutional hospital services (including but not limited to emergency room care, surgical care, acute care, etc)
- Institutional radiology services
- Physical Therapist
- Massage therapist
- Chiropractor
- Physician
- Laboratory services
- Dentist
- Ophthalmologist
- Psychologist/Psychiatrist/mental health professionals
- Nutritionist/registered dieticians
- Pharmacist/prescription service
- Other (please specify) : _____

Thank you for your participation.

Appendix B
Survey Evaluation Template

Survey Evaluation

Thank you for your feedback on this instrument. In addition to completing this evaluation of the survey, feel free to provide any comments or directives on the survey itself.

Please select you level of agreement with each of the following statements regarding the survey using the scale provided.

Item	Scale					Comments / Recommendations for Improvement
	<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly Agree</i>	
The purpose of the survey was clear.						
The directions were clear.						
The questions were easily understood.						
Questions sought information applicable to the survey topic.						
Respondents had the information needed to accurately answer each question.						
Terminology was clear and easily understood.						

OVER

Please indicate your responses/feedback in the space provided.

In your opinion, do these questions provide an accurate picture of how institutions are managing medical expenses for care of student-athletes and how institutional finances are impacted?

Yes No

If no, what additional information / questions would increase the accuracy of the picture of how institutions are managing medical expenses for care of student-athletes?

Please describe specific aspects (or questions) of this survey which are most valuable.

Please describe any revisions you feel would improve the validity and usefulness of this survey.

Thank you for your time and expertise.

Appendix C
Initial Recruitment Email Script

Subject line: Request for Participation

Dear _____,

My name is Karen Straub Stanton MS, ATC and I am a PhD candidate in the Department of Educational Foundations, Leadership, and Technology at Auburn University. I am inviting you to participate in my research study to **assess and compare student-athlete medical care expenses and their management in institutions of higher education**. You have been selected as a possible participant because of your professional position within your institution.

If you agree to participate, you will be asked to complete an online survey by following the link below. This survey should take approximately 20-30 minutes to complete. There are no perceived risks associated with completing this survey. All respondents and answers will remain confidential. To further protect your privacy and ensure confidentiality, identifiable institutional name will be removed prior to data analysis and replaced with confidential code. All results will be summarized and published/reported in aggregate form only.

At the conclusion of the survey, the software is instructed to generate a report summarizing your responses. You may wish to retain this information for your use.

If you have any questions or would like more information regarding this project please contact Karen S. Straub Stanton at strauks@auburn.edu or Dr. David Shannon at shannndm@auburn.edu or 334-844-3071.

Thank you for your time and consideration.

Respectfully,

Karen S. Straub Stanton MS, ATC

Start Survey:

https://auburn.qualtrics.com/jfe/form/SV_ah0ptcfdSX259g9

Appendix D
Informational Letter from IRB



EDUCATIONAL
FOUNDATIONS,
LEADERSHIP,
AND TECHNOLOGY

AUBURN UNIVERSITY

COLLEGE OF EDUCATION

**INFORMATION LETTER
for a Research Study entitled**

***“Financial Management of Medical Care of Intercollegiate Student Athletes in
Institutions of Higher Education”***

You are invited to participate in a research study to gain insight into the financial issues associated with medical care of intercollegiate student athletes and the current administrative policies, practices, and strategies that impact higher education institutional finance for the medical care of these student athletes. The study is being conducted by *Karen S. Straub Stanton MS, ATC* under the direction of *Dr. David Shannon* in the Auburn University Department of *Education, Leadership, Foundations and Technology*. You are invited to participate because you are *servicing in the role of Director of Sports Medicine/Head Athletic Trainer at your NCAA Division I Football Bowl Subdivision institution belonging to the Atlantic Coast Conference (ACC) including Notre Dame, the Big Ten Conference (B1G), the Big 12 Conference, the Pac-12 Conference, or the Southeastern Conference (SEC)* and you are age 19 or older.

If you decide to participate in this research study, you will be asked to *review the details of this informational letter, acknowledge agreement to participate by initiating the electronic survey, and complete an electronic survey via survey software (Qualtrics)*. Your total time commitment will be *approximately 20-30 minutes to complete this survey*.

The risks associated with participating in this study are *minimal*. To minimize these risks, we will *remove institutional name and replace with a code*. *The survey is voluntary and participants may skip any questions that they may be uncomfortable answering. Answering the survey questions is not expected to adversely affect participants; however, if participants experience any discomfort, they will be encouraged to contact the principal investigator or project advisor.*

To thank you for your time the software will present a report of the participant’s response at the survey conclusion. Participants may wish to print / retain this information for use by participant.

If you change your mind about participating, you can withdraw at any time during the study. Your participation is completely voluntary. If you choose to withdraw, your data can be withdrawn as long as it is identifiable. Your decision about whether or not to participate or to stop participating will not jeopardize your future relations with Auburn University, the Department of *Education, Leadership, Foundations and Technology* or *the investigator(s)*.

Any data obtained in connection with this study will remain confidential. We will protect your privacy and the data you provide by examining de-identifiable data in analysis. Information collected through your participation may be in fulfillment of educational requirements as well as professional presentation and/or publication.


If you have questions about this study, please contact Karen S. Straub Stanton MS, ATC at strauks@auburn.edu or Dr. David Shannon at shannmdm@auburn.edu or 334-844-3071.

If you have questions about your rights as a research participant, you may contact the Auburn University Office of Research Compliance or the Institutional Review Board by phone (334)-844-5966 or e-mail at IRBAdmin@auburn.edu or IRBChair@auburn.edu.

HAVING READ THE INFORMATION PROVIDED, YOU MUST DECIDE IF YOU WANT TO PARTICIPATE IN THIS RESEARCH PROJECT. IF YOU DECIDE TO PARTICIPATE, THE DATA YOU PROVIDE WILL SERVE AS YOUR AGREEMENT TO DO SO. THIS LETTER IS YOURS TO KEEP.


Investigator's signature 2/5/18
Date

Karen S. Straub Stanton
Print Name


Co-Investigator 2-5-18
Date

David M. Shannon
Printed Name

The Auburn University Institutional Review Board has approved this Document for use from 02/20/2018 to 02/19/2019
Protocol # 17-495 EP 1802

Add this approval information in sentence form to your electronic information letter!

Appendix E
Follow-up Recruitment Email Script

Subject line: Request for Participation

Dear _____,

My name is Karen Straub Stanton MS, ATC and I am a PhD candidate in the Department of Educational Foundations, Leadership, and Technology at Auburn University. I am inviting you to participate in my research study to **assess and compare student-athlete medical care expenses and their management in institutions of higher education**. You have been selected as a possible participant because of your professional position within your institution.

If you agree to participate, you will be asked to complete an online survey by following the link below. This survey should take approximately 20-30 minutes to complete. There are no perceived risks associated with completing this survey. All respondents and answers will remain confidential. To further protect your privacy and ensure confidentiality, identifiable institutional name will be removed prior to data analysis and replaced with confidential code. All results will be summarized and published/reported in aggregate form only.

At the conclusion of the survey, the software is instructed to generate a report summarizing your responses. You may wish to retain this information for your use.

If you have any questions or would like more information regarding this project please contact Karen S. Straub Stanton at strauks@auburn.edu or Dr. David Shannon at shannndm@auburn.edu or 334-844-3071.

Thank you for your time and consideration.

Respectfully,

Karen S. Straub Stanton MS, ATC