THE ROLE OF BACHELOR'S DEGREE EMERGENCY MEDICAL SERVICES PROGRAMS IN THE PROFESSIONALIZATION OF PARAMEDICINE

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The vision for the future of EMS involves a broader public health role and will require an increase in the professionalization in the field of paramedicine. There are currently 14 institutions of higher education in the US offering Bachelor's Degrees in the field of Emergency Medical Services (EMS). These Bachelor's Degree EMS (BDEMS) programs are in a unique position to affect the future of paramedicine. This study explored the BDEMS Program Directors' (PD) views regarding the role that their programs have played, are playing, and may play in the professionalization of paramedicine. Semi-structured one-on-one interviews were conducted with the PDs of all 14 BDEMS programs to explore the definition of profession, professionalization within paramedicine, and the role of BDEMS programs in said role. The interviews were recorded; the transcripts were analyzed to identify themes and trends relevant to the issues of professionalism and professionalization. There was no consistent view of what defines a profession. Issues related to autonomy and the existence of, or creation of, a unique domain of practice were infrequently mentioned by the PDs. While most BDEMS PDs feel that paramedicine should be a profession, few felt that it currently is a profession. There was little consensus regarding the role that BDEMS programs should play in the professionalization of paramedicine and some disagreement over what should be the focus of a BDEMS curriculum. While all recognized the teaching role of BDEMS programs, few identified research, leadership,

or community service roles. Four broad strategies for BDEMS programs to increase their role in the professionalism of paramedicine are proposed.

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PREFACE

Since September 11, 2001, and more recently following Hurricane Katrina, the American public has paid considerably more attention to the issues of first responders. Police, fire, and Emergency Medical Services (EMS) represent a societal 'safety net' that everybody hopes they will never need, but take comfort in knowing is there. When tragedy strikes, either on a grand scale or at an individual level, people dial 9-1-1. The public has paid for, and has the right to expect, timely and competent aid in its moment of need.

To be sure, all of the public safety disciplines face challenges to meet the public's expectations for quality service. EMS has unique issues created by pressure on the American health care system as well as diverse workforce that includes a combination of volunteer and career providers practicing at widely different clinical levels. This diversity has created tremendous challenges as EMS struggles to meet the expectation of the public while defining its professional identity and culture.

EMS providers, as a group, are extraordinarily dedicated and take tremendous pride in the essential work that they do. Professionalism is a frequent topic of discussion and lively debate within the community. The issues of professionalism and professionalization in such a diverse occupational and volunteer work group present an interesting opportunity for inquiry. This study explores the role of bachelor's degree programs in EMS in the professionalization of paramedicine.

1. CONTEXTUALIZING THE PROBLEM: EMS IN THE UNITED STATES

The education of a clinician has a significant effect on the individual. Not only does education teach knowledge and skills, it instills professional attitudes and values that persist throughout the career. Historically, emergency medical personnel received much of their training outside of the traditional American higher education system. Over the past twenty years, more and more EMS education is occurring in formal educational settings, with community colleges now sponsoring the largest percentage of EMS programs. Additionally, 14 colleges and universities offer bachelor's degrees in emergency medical services. This study explores the views of the directors of these programs regarding the role that their programs have played, are playing, and may play in the professionalization of paramedicine.

In order to fully appreciate the current state of EMS and EMS education in the United States, it is valuable to look at the historical antecedents that have influenced today's situation. By way of introduction, this chapter provides a brief overview of the history, evolution, and future of out-of-hospital emergency care.

The virtue of providing aid to a fellow human being in need is as old as recorded history. The parable of the Good Samaritan appears in the Bible illustrating the compassion and caring that we should show our neighbors. While providing assistance to our neighbors in need is an ancient tradition, formal systems of providing care to the suddenly injured were first developed as a military necessity. The reality of battle involves having a predictable location where large

numbers of traumatic injuries would occur. Clearly, the armies that were most successful in reducing morbidity and mortality on the battlefield realized an advantage in the war.

Systems of providing rapid care to battlefield injuries existed during the Greek and Roman Empires, where surgeons were present during the battle to treat the wounded. This practice was largely abandoned for hundreds of years, and it was common for the battlefield injured to lie in place until the fighting stopped, at which point those still alive would be collected and taken to hospitals.

1.1. A Concept is Born: The Early History of Emergency Medical Care

According to Barkey (1978), the most direct ancestor of modern EMS evolved during the Napoleonic Wars. Appalled by the unnecessary deaths of French soldiers when fighting the Prussians at Spires, Dominique-Jean Larrey developed an organized system of bringing help to the wounded during battle and carrying them away from the danger. The system was first used in a battle fought in the mountains of Konigstein in 1793. The ambulance system so impressed the young Napoleon Bonaparte, that Larrey was ordered to organize an ambulance system for the Italian campaign.

Larrey designed a light-weight, horse-drawn, two wheeled “flying ambulance” which picked up wounded soldiers during the battle and transported them to a hospital. The ambulance was often staffed by a surgeon who provided care on the battlefield and during transportation. The system

was used extensively and very successfully during Napoleon's Italian campaign of 1797 and in 1798 he organized a similar system for the French army in Egypt (Haller, 1990).

The American Civil War brought the concept of a rapid evacuation and treatment of battlefield injuries to the United States. The military physician Jonathan Letterman is largely credited with developing an extensive system of mobile hospitals and an ambulance service for the evacuation of battlefield injuries. This system proved remarkably effective at Chancellorsville, Antietam, and Gettysburg, and was adapted for use throughout the Union army. Letterman's plan for the rapid care and evacuation of wounded to temporary field hospitals located close to the battlefield revolutionized military medicine (Barkley, 1978). Letterman's concepts remain the predominant model of caring for combat wounded soldiers to this day.

Civilian ambulance services in the United States began in a number of American cities following the Civil War. The Commercial Hospital in Cincinnati, Ohio is widely believed to have had the first civilian hospital-based ambulance service in 1865, followed shortly by Bellevue Hospital in New York City in 1869 (C. Post & Treiber, 2002). Throughout the latter half of the 19th century, a number of hospital-based ambulance services emerged. They were typically staffed by a physician (usually an intern or more senior "ambulance surgeon") and a poorly trained and paid ambulance driver.

During the Spanish-American War, Nicholas Sin observed that the "fate of the wounded soldier is determined by the hand which applies the bandage" and litter bearers began to apply field dressings to control bleeding. This was the first organized attempt to have non-physicians

performing ‘medical’ care. World War I represented the creation of a non-physician ‘medic’ who was specifically trained in emergency care and who’s responsibility it was to provide care and evacuation *during* the battle (Dennison, 2000). The immediate care of injuries, combined with other medical advances (anesthesia, emergency surgical procedures, orthopedic care, etc) lead to a continued decrease in the morbidity and mortality associated with wartime injuries.

In the civilian sector, ambulance services continued to develop, were largely hospital-based, and staffed with physicians-in-training and nurses. In 1928 Julian Stanley Wise and nine other men organized the first independent volunteer rescue squad in Roanoke, Virginia (NAEMT, 2003). The Roanoke experiment was the first major civilian initiative to provide rescue and prehospital care by volunteer non-physicians.

Despite pockets of volunteer services throughout the country, the overwhelming majority of civilian ambulance service prior to World War II was provided by public and private hospitals. These ambulances responded only to their local areas and were typically staffed by interns or resident physicians and nurses. While these systems lacked infrastructure, organization, communications, and equipment, they were quite successful in providing on-scene care and transportation of the sick and injured to the hospital. The outbreak of World War II, however, placed an extraordinary demand on the US health care system. Physicians and nurses with emergency experience were diverted from civilian ambulance services to other, more pressing public health needs.

Unlike most European countries, physicians and nurses did not return to ambulance work in the United States following World War II. Throughout the 1950s and into the 1960s, ambulances in the US were most often hearses (or similar vehicles) staffed by untrained personnel. Half of the ambulances in the country were operated by mortuary attendants, most of whom had never even taken a first aid course (Barkley, 1974). Very little legislation or regulation applied to ambulance services. Providers had relatively little formal training, and physician involvement was virtually non existent (C. Post & Treiber, 2002).

1.2. EMS in the United States Yesterday: The Birth of Modern EMS

In the mid-1960s a confluence of events stimulated a revolution in prehospital care. First, there were dramatic improvements in the techniques of Cardiopulmonary Resuscitation (CPR). Cardiac arrest, a condition that was formerly a virtual death sentence, now had a treatment and a glimmer of hope for survival. Throughout the 1960s there was an increasing understanding of the pathophysiology of fatal dysrhythmias, improvement in CPR, pharmaceuticals, defibrillation, and ventilation pioneered by such EMS legends as Peter Safar, Leonard Cobb, Herbert Loon, and Eugene Nagel (Eisenberg, 1997). The effectiveness of cardiac arrest resuscitation is highly time dependent, thereby requiring an organized system of response. In the mid-1960s Pantridge and Geddes were the first to implement a mobile coronary care unit in Belfast, Ireland, and reported an unprecedented 20% cardiac arrest survival rate (American Heart Association, 2000), demonstrating the efficacy of prehospital care for cardiac arrest.

Despite the advances in emergency cardiac care, the birth of the modern EMS system in the US is generally attributed to initiatives to decrease the mortality and morbidity secondary to motor vehicle trauma. In 1966, the National Academy of Sciences published a white paper entitled *Accidental Death and Disability: The Neglected Disease of Modern Society*. This report quantified the magnitude of traffic-related death and disability and vividly described the deficiencies in prehospital care in the US (Bledsoe *et al.*, 2000). The white paper made a number of recommendations regarding ambulance systems, including a call for standards for ambulance design and construction, the development of state level policies and regulations regarding ambulance services, and adopting methods to provide consistent ambulance services at the local level (National Academy of Sciences National Research Council, 1966).

The Department of Transportation (DoT) was created as a result of the Highway Traffic Safety Act of 1966 (National Highway Traffic Safety Administration, 1966). The DoT was given authority and responsibility to improve EMS education, including development and implementation of standards for training. States were encouraged to develop regional EMS councils, the cost of which was largely funded by the Highway Safety Programs. Over the next 12 years, the DoT spent more than $142 million for EMS system development (Mustalish & Post, 1994).

In the early 1970s there was a tremendous amount of public and private support for EMS system development. In 1972, the Department of Health, Education, and Welfare allocated $16 million to EMS demonstration projects in five states. Also in 1972, the Robert Wood Johnson Foundation appropriated $15 million to fund 44 EMS projects. In 1973, the federal government

passed Title XII to the Public Health Service Act. *The Emergency Medical Services Systems Act of 1973* provided over $300 million for the development of 304 EMS regions across the US ("Emergency medical services systems act of 1973", 1973) coordinated by a EMS office in each state (C. J. Post, 1992). The roles of the State EMS office was to serve as the organizational unit for EMS system design and implementation (Boyd, 1983).

1.3. EMS in the United States Today: Yesterday's Vision-Today's Reality

In the years since 1966, EMS has evolved in the US into a huge and highly sophisticated system. Within a span of only forty years, the US has built a complex EMS response system, virtually from scratch. As of August 2005, 99% of the American population was able to dial 9-1-1- to receive emergency medical assistance (National Emergency Number Association, 2005) and 99% of the population over 18 years old knows the number to dial in an emergency (Billitteier *et al.*, 2000). This represents one of the most successful public health education programs in history. In every community in the country, trained and competent personnel are part of a system that responds quickly to medical and traumatic injuries at a citizen's beck and call.

Lindstrom and Losavio (2005) estimate that EMS providers treat approximately 25 million patients a year in the US. EMS systems have annual expenditures exceeding $6.75 billion (Sayer *et al.*, 2001). In 2003, there were 680,454 certified EMS personnel in the United States.[1]

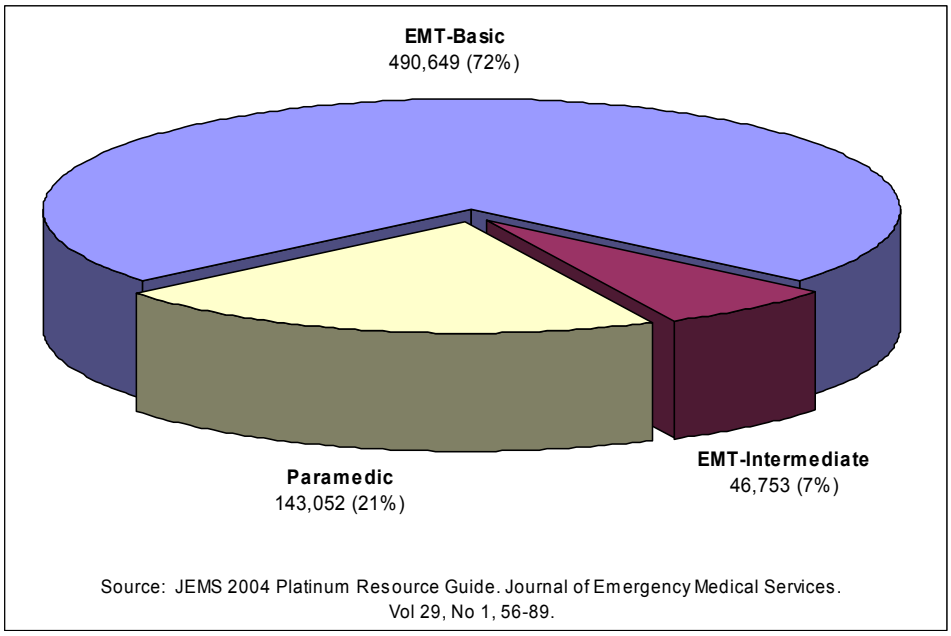
[1] This number does not include individuals certified as 'First Responders." While First Responders are an integral part of the emergency medical *system*, they typically provide EMS care as an ancillary duty to some other primary role (e.g. police officer, fire fighter, life guard) and are therefore not included in this analysis.

Like a number of other health occupations, EMS has stratified and hierarchical certification/licensure levels. The majority (72%) of EMS personnel are certified at the Emergency Medical Technicians-Basic (EMT-B) level (Lindstrom & Losavio, 2004). EMT-Basics receive approximately 120 hours of training (Samules & Stoy, 1994) and their scope of practice is generally limited to relatively simple, non-invasive interventions.

In 2003 there were 143,052 paramedics, representing 21% of the EMS workforce. Paramedics are the highest level of prehospital credential and they undergo approximately 1000-1200 hours (Stoy & Margolis, 1998) of training. The scope of practice of a paramedic is considerably more complex than that of the EMT-Basic, and it includes higher risk interventions and invasive procedures (for example intravenous access, medication administration, advanced airway procedures, etc.)

Due to the relatively large gap in training time and competencies between the EMT-Basic and the paramedic levels, many states have adopted certification/licensure levels between the two. The nomenclature and scopes of practice for these "intermediate" levels are not standardized nationally, which has led to considerable confusion. EMT-Intermediates represent approximately 7% of the EMS personnel, and their training and scopes of practice vary considerably from state to state, making comparison difficult. Figure 1 summarizes the number of EMS personnel by level.

Figure 1. EMS Providers by Level in 2004



EMS providers function in an environment with virtually no direct supervision and only limited backup. Self regulation and self control are critical components of patient safety in EMS. The time sensitivity of many emergency situations makes it virtually impossible for patients to have the luxury of a second opinion and they must completely trust the competence and integrity of the provider. Either consciously or unconsciously, the public has entrusted the EMS community with assuring that, in their moment of need, the emergency medical response will be timely and competent.

Many of the patients who access the emergency medical system have complicated medical or traumatic conditions that require considerable knowledge, skill, decision making, and judgment for safe and effective management. Some are critically ill or injured, and the proper care can literally make the difference between life and death. For most, however, the issue may not be

immediately life threatening, but the crisis is no less significant to the patient and his/her family. In many respects, building a comprehensive emergency response system that is available to every citizen in the country regardless of their ability to pay, location, complaint, or situation is an extraordinary accomplishment indeed.

Despite many successes, however, the EMS system in the US faces significant challenges—and failure to address them may threaten the health and safety of the patients that rely on high quality, out-of-hospital emergency care. Three significant challenges facing today's EMS system are incongruence between design and reality, strain placed on the system due to pressure on the US health care system, and a dearth of leadership.

1.3.1. Incongruence between design and reality

The current EMS system is designed around a life saving mission. The configuration, staffing, training, design, and culture of EMS perpetuate the commonly quoted slogan that "EMS saves lives." While EMS *does save lives,* it does so less frequently than many people realize. One unintended consequence of the success of public education about 9-1-1 is the fact that the public will call 9-1-1 for a range of medical problems ranging from minor ailments to genuine life-treats (Clawson, 2002). In most systems only 20-30% of the 9-1-1 calls require advanced life support skills, and only about 5-10% of the calls represent true threats to life or limb (Overton & Stout, 2002). An observation of one EMS educator is that "EMS training spends 95% of its time talking about 5% of the job" (Taigman, personal communication, September 26, 2005).

This disconnect represents an opportunity for improvement and alignment of the reality of EMS with the mission. While the life saving role of EMS is critical and must be done competently, for EMS to truly serve the public's need, the configuration, staffing, training, design and culture need to reflect the needs of all patients who access the emergency care system. The US EMS system is currently designed primarily to respond to cardiac arrests, serious trauma, and mass casualty situations and poorly designed to deal with "minor" complaints that represent the vast majority of the call volume. Ironically, EMS personnel are far better trained to deal with a knife impaled into a patient's chest than a splinter in their finger. In general, the only patient disposition at the disposal of EMS personnel is to transport the patient to the emergency department; in fact, the emergency department may not be the most efficient and effective location for the treatment of the patient.

1.3.2. Strain on the US Health Care System

The limited disposition options available to EMS personnel are of minor concern when emergency departments are operating below capacity. In recent years, however, the problem of emergency department overcrowding has been well documented in academic journals (Derlet & Richards, 2000) (Derlet *et al.*, 2001), (Hwang & Concato, 2004), (Trzeciak & Rivers, 2003) and the popular press (Eisenburg, 2000), (Avila, 2001). According to the American College of Emergency Physicians, emergency department visits rose to 114 million in 2003, a 27% increase over ten years, while the number of emergency departments decreased by 15% in the same time period. As of 2005, the majority of the Nation's emergency departments are operating "at" or "over" capacity (2005). Unfortunately, there is no end in sight for emergency department

overcrowding problem, and the problem is expected to worsen due to two main factors: the increasing percentage of the population that are uninsured or under-insured and the shifting demographics of the American population.

In addition to emergency department overcrowding, there are now 40 million people in the US who are uninsured and millions more who are under-insured. Patients who cannot afford to pay for medical care and who have no health insurance often turn to emergency medicine for primary care and the treatment of conditions that have become acute because they lack access to regular medical care. They may also rely on the emergency department as their only access to health care, using it as a doctor's office to provide primary care services without a co-payment. The reliance on emergency medicine for primary health care is exacerbated by the scarcity of primary care practitioners in inner cities and rural areas (American College of Emergency Physicians, 2003).

Finally, It is estimated that the elderly are 4.4 times more likely to use EMS than the non-elderly (Strange *et al.*, 1992). As the proportion of the population that is over 65 years of age grows though 2030 this will place increased pressure on EMS systems to respond. The problem of strain on the emergency care system and emergency departments is projected to worsen in the coming decades, and paramedicine is ideally positioned to help alleviate this pressure, if it is able to change and adapt to the dynamic health care environment to which it is inextricably linked.

1.3.3. A Dearth of Leadership

On July 28-30, 2003, the results of an 18-month investigation were reported in a number of articles published in USA Today under the series title "Six Minutes to Live or Die". One of the conclusions of this study was that "emergency medical systems in most of the nation's 50 largest cities are fragmented, inconsistent and slow" (Davis, 2003). According to his research, you have a 45% chance of survival from a ventricular fibrillation cardiac arrest in Seattle, WA and a less than 4% chance of survival from the same incident in Washington, DC.

The disparity in quality of EMS from city to city cannot be explained in terms of cost of the system, demographics, socioeconomics, or risk factors. Davis suggests that there are three main reasons why the quality of EMS in major American cities is so varied:

- Many cities' emergency services are undermined by their culture. Infighting and turf wars between fire departments and ambulance services cause deadly delays.
- Most cities don't measure their performance effectively, if at all. They don't know how many lives they're losing, so they can't determine ways to increase survival rates.
- Many cities lack the strong leadership needed to improve emergency medical services. Leadership…can make a dramatic difference.

As a former paramedic, Davis noted that physician leadership was lacking in EMS. He went on to say that "powerful, proactive city leadership can turn a sluggish emergency medical system into a highly effective one" (Davis, 2005). What was not specifically stated, however clearly implied, is the fact that the EMS leadership is also falling short of the public expectations. Based

on a case study in Boston, Davis states that the five critical elements of EMS leadership are to deal with turf battles, breakdown walls, assure strong medical oversight, enlist the public, and get businesses involved.

1.4. EMS in the United States Tomorrow: The EMS Agenda for the Future

In 1996, thirty years after the publication of *Accidental Death and Disability*, the National Highway Traffic Safety Administration (NHTSA) engaged in a bold initiative to reinvent and redefine EMS based on the experiences of the last three decades, a better understanding of the epidemiology of EMS patients, and the changing health care environment. The *EMS Agenda for the Future* (National Highway Traffic Safety Administration, 1996) was the document designed to establish a new direction for the emerging EMS profession. In part, the *Agenda* stated:

> EMS of the future will be community-based health management that is fully integrated with the overall health care system. It will have the ability to identify and modify illness and injury risks, provide acute illness and injury care and follow-up, and contribute to treatment of chronic conditions and community health monitoring. EMS will be integrated with other health care providers and public health and public safety agencies. It will improve community health and result in more appropriate use of acute health care resources. EMS will remain the public's emergency medical safety net. (p. iii)

This vision for the future of EMS is dramatically different from the role of EMS envisioned nearly forty years ago. In fact, it is dramatically different from the current reality of EMS. In

order for EMS to successfully transition into new practice roles, significant changes in the culture of EMS must occur. Many initiatives to become a more community-based health management system have met resistance and been difficult to start and/or maintain due to cultural challenges of change in EMS systems.

1.4.1. The Promise of Professionalizing Paramedicine

As in the mid 1960s, when a confluence of events and strong leadership laid the foundation for what became the modern EMS system, paramedicine as a profession finds itself at a crossroads. The existing crisis in access to emergency care, which is expected to get worse in the coming decade, creates an environment in which change is necessary. The disconnection between the original mission of EMS and today's reality identifies an opportunity for greater service to society. The *EMS Agenda* defines a vision for the future of EMS, and it will take leadership from within the EMS community to get there.

The incongruence between design and reality and the strain on the US health care system create opportunity for the re-engineering of emergency medical services to a more comprehensive, community-based health management system. This expanded role for EMS can provide a greater span of services to the public. This transition will require the emergence of a unique domain of expertise that is dramatically different from today's EMS. While it is unlikely that all of EMS could make this transition, it is possible for the paramedic level to do so. For the paramedic subset of the EMS community to emerge as the preeminent authority in this new

domain of practice, that group must take control its own destiny, assume responsibility for its future, and lead the EMS community to this destination.

Therefore, it is important that paramedics adopt a culture of professionalism, especially in-terms of control over their unique domain of practice, self determination, and self regulation. EMS educational programs located within Universities are in a unique position to influence this transition if they are able to assist in the professionalization of paramedicine.

2. STATEMENT OF THE PROBLEM AND THE RESEARCH QUESTIONS

2.1. Statement of the Problem

This study explores how BDEMS program directors view issues related to professionalism in paramedicine and the role that BDEMS programs play in the professionalization of paramedicine. Professionalization is a common subject of discussion in the EMS community. Leaders in the field have expressed frustration that EMS has not achieved a greater degree of professionalism. While EMS is often referred to as a "young" occupation, it appears that other allied health professions have experienced greater professionalization in a shorter period of time.

Additionally, a confluence of factors is creating an opportunity for paramedicine to expand its role in the American health care system. The *EMS Agenda for the Future*, published in 1996, identifies EMS as a unique discipline representing the intersection of health care, public safety, and public health. The future of EMS could involve considerable integration of EMS into the overall US health care system as well as an expanded role in public health, community health monitoring, disaster preparedness, emergency management, and prevention initiatives. While there appears to be general agreement regarding the vision and direction of the *Agenda*, the EMS community seems to be struggling with "how to get there." Professionalization of paramedicine may provide an opportunity to reshape EMS into this vision.

While it may be difficult to broaden the role of EMT-Basics and EMT-Intermediates, it may be possible to begin with Paramedics, the highest level of EMS licensure. The transition of paramedicine to a more "community-based" allied health profession will require professionalization of that subset of the EMS community, especially in terms of autonomy (self regulation and self determination) and the creation of a unique domain of expertise.

Bachelor's Degree programs in Emergency Medical Services are in a unique position to facilitate the professionalization of paramedicine; however, they can only do so if their role is clearly defined and understood.

2.2. Primary Research Question

How do the directors of BDEMS programs view issues of professionalism of paramedicine and the role that BDEMS programs play in the professionalization of paramedicine?

2.3. Secondary Research Questions

1. How do the directors of BDEMS programs define a profession? What traits/characteristics or types of relationships do they associate with an occupation that is viewed to be a profession? How does this compare to the major themes of professionalization in the contemporary literature?
2. In what ways, if at all, do the directors of BDEMS programs think that paramedicine is (or is not) a profession? Do they believe that paramedicine should be (or should become) a

profession? Do they view this to be a positive and/or negative thing (for Paramedics, EMS in general, the employers of Paramedics, patient care) and why?

3. How do the directors of BDEMS programs see the role of BDEMS programs in the professionalization of paramedicine? How does this compare to the major themes of professionalization in the contemporary literature?
4. What do the directors of BDEMS programs see as the barriers and constraints for BDEMS programs to contribute to the professionalization of EMS, now and in the future?
5. How do the directors of BDEMS programs feel that their programs have contributed to the professionalization of paramedicine?

This research makes a number of assumptions. First, it is assumed that it is a goal of the EMS community to professionalize paramedicine. Secondly, it is assumed that one of the goals of EMS is to achieve the vision of the *EMS Agenda for the Future*. Finally, it is assumed that BDEMS programs are able to play a role in achieving both of these goals.

3. CONCEPTUALIZING THE PROBLEM: PROFESSIONS, PROFESSIONALS, AND PROFESSIONALIZATION

> ”Profession,” “professionalization,” and “professional” are all extremely ambiguous words, much of their stubborn imprecision hinges on their confusing and sometimes incompatible multiple connotations. But there is no other word in the English language which can be used to represent an occupation so well organized that its members can realistically envisage a career over most of their working years, a career during which they retain a particular occupational identity and continue to practice the same skills no matter in what institution they work.
>
> Eliot Freidson
> Professionalism Reborn, 1994

The study of professions has a rich and fascinating history. While work has been a subject of interest for hundreds of years, the in-depth analysis of the professions is largely limited to the last century. It is widely believed that Professor A. M. Carr-Saunders in the 1928 Herbert Spencer Lecture at Oxford was the first social scientist to systematically analyze the transition of occupations in terms of a process of professionalization (Vollmer & Mills, 1966). Since that time, hundreds of authors have written on the subject.

This section, reviews some of the significant literature of the professions, using a framework proposed by Andrew Abbott. These basic concepts will frame a discussion about the major challenge of professionalization within the health-related occupations other than medicine. The four major works of Eliot Freidson will be reviewed, culminating in a description of Freidson’s Ideal Type Model of Professionalism. This model serves as the conceptual framework for this work.

There has been much debate throughout the study of work about the various models for studying the professions. Freidson (2001) poses a question that gets to the heart of the modern dilemma in studying the professions. That is, how do we, "nurture and control occupations with complex, esoteric knowledge and skill, some of which provide us with critical personal services, others with functional knowledge without which much of our standard of living could not exist, and others with enlightenment without which we would be culturally impoverished?"

3.1. The Continuum of Occupational Categorization

Not long into any discussion about the professions, a debate will inevitably ensue about what does, and does not, constitute a profession. Unfortunately, the historical reference to the three (sometimes four) classic professions of medicine, law, and theology (and sometimes military) always seems to lead to more questions than answers, and quickly proves to be superficial and unsatisfying. Clearly, when one studies the sociology of work, one must recognize that various occupational groups occupy different strata in terms of compensation, prestige, power, autonomy, and status. While attempts to rank occupational groups in these terms have done little to illuminate the important issues, there are obviously some occupations that repeatedly "rise to the top," no matter what the categorization schema.

Greenwood (1966) illustrated this point when he noted that the difference between a professional and nonprofessional occupation is not a qualitative distinction, but a quantitative one. He stated that:

> the phenomenon of professionalization cannot be structured in terms of clearcut classes. Rather we must think of the occupations in a society as distributing themselves along a continuum. At one end of this continuum are bunched the well recognized and undisputed professions (e.g., physician, attorney, professor, scientist); at the opposite end are bunched the least skilled and least attractive occupations (e.g., watchman, truckloader, farm laborer, scrubwoman, bus boy). The remaining occupations, less skilled and less prestigious than the former, but more so than the latter, are distributed between these two poles. The occupations bunched at the professional pole of the continuum possess to a maximum degree the attributes [of the professions] …As we move away from this pole, the occupations possess these attributes to a decreasing degree. (p. 10)

Therefore, issues of profession or non-profession are not a matter of black and white, but rather a spectrum in which there are many, many shades of gray. Attempts to determine if a particular occupational group is, or is not, a profession generally become a debate about what is the lightest shade of gray one is willing to still call gray. Instead of a binary classification system, most scholars are more interested in the extent to which a particular occupational group has gravitated toward one end or the other of the spectrum.

3.2. Ways of Seeing the Professions

The role of professions in modern society is of great interest to academics as well as the public and the professions themselves. Throughout the last century hundreds of authors have written on the subject of professions. Obviously, many of these great thinkers have contributed

substantially to the understanding of the complexity and subtleties of the behavior of professions, emerging professions, semi-professions, marginalized professions and the dozens of other labels used to describe the continuum of occupational categorization. While distillation will result in a considerable loss of depth and breadth of the discourse, categorizing the work will provide a useful framework for discussion.

Andrew Abbott's (1988) classification of the views of professionalism will be used to frame the major issues in the literature. Abbott proposed that the discourse of professionalism can be roughly divided into four basic perspectives: functionalist, structuralist, monopolist, and culturalist. These four points of view roughly reflect phases as the literature evolved over the last 75 years.

As each of the different perspectives on professionalism are discussed, it is important to note that the same phenomenon is being viewed through different lenses. As a result, there is considerable overlap. Of course, no one author purely represents only one viewpoint. The scholars who write about professionalism do not fit neatly into pigeon holes; invariably the analysis is multi-dimensional. In the section below, various arguments have been categorized; there is no implication that a particular author purely represents a particular framework.

3.2.1. A Functionalist Perspective of the Professions

As is frequently the case in social sciences, a functionalist approach is the first step in systematic analysis of a complex phenomenon. Functionalist conceptualizations of the professions

dominated the literature for the first 30-40 years of inquiry, and were particularly prevalent in the post-World War II period, which some have even termed the golden age for professions since their preeminence was virtually unchallenged. During this time in American history the professions played a dominant role in US society; a significantly larger role than they played previously and (arguably) more than they have played since. During this time, the literature was descriptive in nature and decidedly non-critical.

As stated earlier, in 1928 Professor Carr-Saunders was probably the first to describe "professions" and "professionalism" by describing the behavior of occupational groups in nineteenth century England (Carr-Saunders, 1928). His description was largely from a functional point of view. Carr-Saunders described professionalization in terms of specialized skill and training, minimum fees or salaries, formation of professional associations, and codes of ethics governing professional practice (Vollmer & Mills, 1966).

In 1933, Carr-Saunders and Wilson published *The Professions*, the first significant treatise on the subject. They proposed that professions were functionally different from other occupational groups because they consisted of organized bodies of experts who uniquely applied highly complex and esoteric knowledge in different cases. Professions also had formal educational systems typically consisting of prerequisites, rigorous training, and examination prior to entry. Carr-Saunders and Wilson noted that professions typically developed and enforced a code of ethics or behavior upon its members.

For the next fifty years, scores of authors built upon the work of Carr-Saunders and Wilson and attempted to describe the functional characteristics that seem to make some occupational groups unique from others in terms of status and prestige. This literature tended to generate a laundry list of traits associated with professions and dominated the early work in the professions. Some of the essential traits of the profession include a substantial body of unique knowledge, a national association, a code of ethics, prolonged period of specialized training, sense of calling/lifelong commitment, mastery of a discipline of great social import, a scientific journal, and self regulation (Goode, 1957), (Cogan, 1953). These traits were largely derived from analysis of the classic professions of medicine, law, and the clergy.

These characteristics were used to compare occupational groups to the classic professions, or to each other. This comparison was often done to make a case that a particular occupation was, or was not, a profession (Goode, 1966), or more of a profession than another occupational group. The analysis of professions relative to these lists of characteristic has been termed a "trait based" or an "inventory approach" and is decidedly functionalist.

While it is difficult to lump all the functionalist literature together, the dominant emphasis of the work tends to focus on the special character of the knowledge and skill of the profession, the prolonged specialized training, and the professionals special ethical or altruistic orientation toward their clients (Freidson, 1986).

The functionalist approach persists today in the rhetoric of many occupational groups as they attempt to convince their membership, colleagues, or society in general that they deserve the

coveted title of a profession. The inventory approach generates an argument that the profession of interest has a check mark in each of the important columns, and therefore *must* be a profession.

3.2.2. A Structuralist Perspective of the Professions

The structural analysis of professions focuses primarily on the organization and configuration of the occupational group; the content of the work and the relationship that the practitioner has with the client are not the focus of the analysis. According to Parsons (1951), physicians in the 1920s represented the premier example of a profession from a structural point of view. In a structural analysis, variations in the degree to which professions have gravitated toward a profession are largely explain by a the fact that they have not yet fully professionalized (Abbott, 1988).

Greenwood's (1957) work suggested key structural elements representing the difference between professions and non-professions: a systematic body of theory, professional autonomy, professional authority, sanction of the community, a regulative code of ethics, and the existence of a professional culture.

Theodore Caplow (1954) suggested that there exists a predictable sequence of professionalization, based on his study of medical technology in Minnesota in the 1950s. Caplow proposed that the first step of professionalization is the establishment of a professional association, this is followed by changing the name of the occupation, and the development/promulgation of a code of ethics. He proposed that the final phases of

professionalization involve political agitation to maintain professional exclusivity, and the development of training facilities.

In *The Professionalization of Everyone?*, Wilensky (1964) suggests another sequence of events for professionalization. First, the work must become a full time pursuit (or as Wilensky puts it, "start doing full time the thing that needs doing"). Next comes the establishment of training schools and the formation of a professional association. Due to increasing concerns over defining and establishing a clear occupational niche, the group becomes politically active to protect its practice domain. Finally, the group develops a formal code of ethics.

According to Gross (1958), as an occupation approaches professional status, there are important structural changes that alter the way that the occupation sees its work, how it relates to society, and the way that society relates to the profession. He suggests that a framework to discuss these changes involves the criteria of professionalization: an unstandardized product, degree of personal involvement of the professional, wide knowledge of a specialized technique, sense of obligation to one's art, sense of group identity, and significance of the occupational service to society.

Another structural dimension for the analysis of professions relies on the distinction between the amateur and the professional. In this definition, professionalism refers to an increasing proportion of the individual's performing the task for payment or salary. This definition relies on participation in the labor market as an indicator of professionalization. In this schema, professionalization involves a process by which fewer and fewer people perform a task for the

pleasure derived from their performance, for the benefit it provides others, or the gratitude of others, but rather more perform it for the income that it provides (Jaffe, 1968).

Freidson (2001) states that a critical metric for those occupational groups in the process of professionalization is the degree to which they have been successful in associating their training programs with a university. They must develop a curriculum that emphasizes new or syncretic theory which intellectualizes the work. A structural analysis of professions is simply to consider the strata of the work force that has attained special knowledge and skills through lengthy study in formal educational programs. In this sense, professionalization is simply the process by which more jobs require formal higher education (Bell, 1976).

According to Wilensky (1964), there are two major structural differences that exist between the professions and other occupational groups: 1) the job of the professional is based on systematic knowledge or doctrine acquired only through long prescribed training; and 2) the professional adheres to a set of professional norms. The professional norms include the performance of technically competent, high quality work and the adherence to a service ideal of placing the needs of the client above one's self-interest, especially if the two are in conflict.

Abbott (1988) is a critic of what he calls a synthetic theory of professionalization. He suggests that despite some case study support, the process of professionalization is "more illusory than real." He claims that the basic assumptions of the synthetic theories "have all been overthrown by recent empirical work." Abbott suggests that the problem with all synthetic theories is the focus on structure rather than work, and constructs a method of analyzing the link between a

profession and its work, the formal and informal social structures, and the interplay of jurisdictional links between professions.

While Wilensky (1964) discusses the structural elements necessary for professionalization, he emphasizes the critical role of professional authority, autonomy, and a service ethic in professionalization. He concludes that due to newly-emerging bureaucratic structures and the proletarianization of work, many occupational groups that aspire to professionalize exist in organizational structures that threaten the autonomy and the service ideal. He concludes that the "professionalization of everyone" is unlikely.

Montagna (1968) analyzed the potentially conflicting priorities of professionalization and bureaucratization in a study of large accounting firms. He reported that as the organization increased in size, bureaucratization increased and there was a concomitant increase in the "number, extent, and specificity of rules …[and] the profession transforms knowledge from an intellectual to a mechanical technique." Hall (1968) described a general inverse relationship between bureaucratization and professionalization, but reported considerable variation in this relationship.

Much of the literature after the 1960s has focused on the political and cultural influences of professions, the relations of professions to political and economic elites, the relationship of professions to the state, market forces, and class systems. Emphasis has been placed on the unusually effective and monopolistic institutions that gain and preserve status and privilege.

3.2.3. A Monopolist Perspective of the Professions

Millerson (1964) recognized that trait-based analysis of professions had considerable limitations and often included political agendas. For example, if one likes a particular profession, he constructs arguments of how that occupational group has the traits of a profession. Others, without such an affinity for the group, find it easy to point to ways in which the group fails to have the traits of a profession. Unfortunately, the word 'professional' is often used by people as a means of flattering themselves or others, rather than as a descriptor of clear intent or meaning (Becker, 1970).

Abbott (1988) summarized the early study of professions as a combination of naturalism and typology, where "…articles on the professions would summarize the life history of their particular case, review the then-current essential traits of a true profession, and decide whether social work, or nursing, or whatever, really was a profession."

The 1960s represented a significant shift in the tone and focus of much of the sociological research, and the study of professions was no different from the rest of the discipline. The public, as well as academics, became increasingly skeptical of power and authority. Until the 1960s, the study of professions was generally descriptive and largely non-critical. Reflecting society as a whole, much of the study of professions in the late 1960s adopted a more critical theory approach.

For the first time, the professions' claims of altruism, self-regulation, and the existence of a unique body of knowledge were significantly challenged. Influential sociologists began to consider the economic self-interest inherent in maintaining status and power as major factors in building and sustaining the title of professional. Authors such as Platt (1969), Rothman (1971), and Auerbach (1976) analyzed the activities of professionals that perpetuated control over the poor, working class, and deviant. The tone of the discourse shifted from neutral to critical and warned of the dangers of unqualified acceptance of the professional's claim of altruism and service ethics.

The monopolist takes a critical view of the process of professionalization. Rather than the normal and natural growth of an occupational group, the monopolist assumes a motive of exclusivity. Wilensky (1964) wrote:

> "In the recent history of professionalism, the organization often comes before a solid technical and institutional base is formed; the professional association, for instance, typically precedes university-based training schools, and the whole effort seems more an opportunistic struggle for the rewards of monopoly than a 'natural history of professionalism'". (p. 157)

Johnson (1972) viewed the system of professions as a way of controlling work and protecting the earning potential of professionals. Specifically, he proposed that professions are able to manipulate free market variables and competition to maintain economic advantage instead of allowing consumers the ability to set prices for services.

According to Larson (1980) bureaucratization causes occupational groups to become heavily invested in controlling their work. The desire for dominance and authority is fueled by an economic incentive. He directly suggests that identification and exclusion become fundamental goals of the professionalization process (Larson, 1977).

The monopolists contend that professionalism cannot merely be based on the length and character of education or work, as there are many occupational groups with comparable education and skill, but markedly different working conditions, specifically in terms of control. Johnson (1972) coined the term "collegiate control" to describe control of the terms, conditions, and content of work. The context of control presupposes a successful political organization which has successfully negotiated the jurisdiction of the work and control over the labor market. Given the monopolist view, one definition of a profession is 'an occupation that has achieved a monopoly with a position of dominance in the division of labor.'

3.2.4. A Culturalist Perspective of the Professions

Culture has always been a part of the analysis of profession. Throughout the study of professions, many authors have written about the unique culture that exists within a profession, and how it differs from other occupational groups. Clearly, occupational groups have a different view of the role that work plays in their lives, their relationships with others, how they control their work, their professional and social responsibilities, and relationships that they have with clients and the community. These cultural dimensions, especially those related to autonomy and control of work, become the primary focus of analyzing professions for the culturalists.

The preoccupation of the sociological literature in the 1940s and 1950s was the analysis of professional norms, role relations, and interactions with clients and other occupational groups. Sociologists emphasized the central characteristics of professions, the specialized and complex formal knowledge, and the ethics of their work. These and other traits were used to distinguish professions from other occupations, and to justify the protective institutions and high prestige afforded to them. Goode (1957) described a profession as a community sharing common experiences and identity. Many of the discussions of professions revolve around the different cultural attributes of the professional class of workers.

Goode (1960) suggests that one of the two core characteristics of a profession are an orientation toward serving the public good. Halmos (1966) cited altruism, and many of the early writers on the topic, including Carr-Saunders and Wilson (1933) and Tawney (1920) discussed the sense of responsibility for the integrity and ethics of one's work.

Wilensky (1964) suggested that one characteristic of a profession is a sense of calling. Part of the calling is the notion that, while the professional is clearly paid for his expertise, he enjoys the work to such an extent that reimbursement is not the primary motivation.

Becker (1970) reported that the occupational commitment was markedly different among professionals compared to typical wage laborer, whose commitment is not to the occupation, but to whichever job provides the most material benefit. According to both Dublin (1956) and

Orzack (1959) it is easier for work to become a central life interest for professionals than for blue-collar workers.

In the 1960s, the dominant writings regarding the culture of profession shifted from the unique characteristics of professions such as altruism and a sense of calling, to the issue of autonomy and control. Instead of service and expertise, *power* became the key word for the discourse regarding the professions (Klegon, 1978). As Freidson (1986) stated, "The mood shifted from one of approval to one of disapproval, from one that emphasized virtue over failings to one that emphasized failings over virtues. The very idea of profession was attacked, implying, if not stating, that the world would be better off without professions."

According to Starr (1982) authority signifies that the profession has obtained or acquired a status, quality, or claim that compels obedience or trust. "The legitimation of professional authority involves three distinctive claims: first, that the knowledge and competence of the professional have been validated by a community of his or her peers; second, that this consensually validated knowledge and competence rest on rational, scientific grounds; and third, that the professional's judgment and advice are oriented toward a set of substantive values, such as health."

The concept of professional autonomy as a major differentiation between professions and other occupational groups was most fully analyzed by Freidson in his two landmark works in 1970, *Profession of Medicine* (1970a) and *Professional Dominance* (1970b). In these works, Freidson suggests that, in addition to the characteristics of the work, a culture of professionalism must

exist. This includes a sense of collegiality and community with peers, commitment/connection to the profession and life long learning, research and the expansion of knowledge of the discipline, self regulation, control, power, and most importantly autonomy.

In *Profession of Medicine*, Freidson (1970a) states that the most treasured characteristic of a profession is its autonomy. "The most strategic distinction [between the professions and other occupation groups] lies in legitimate, organized autonomy—that a profession is distinct from other occupations in that it has been given the right to control its work." He concedes, however, that no profession, medicine included, is ever completely autonomous. All professions depend on governmental bureaucracies for licensure and for the development of laws, statutes, policies, and procedures that profoundly affect the social and economic organization of their work. Despite this regulation, Freidson posits that so long as the profession is free of the technical evaluation and control of other occupations in the division of labor, professional autonomy exists (1970a). It is the degree of autonomy that an occupational group attains that is the main characteristic of a profession. "Professions are deliberately granted autonomy, including the exclusive right to determine who can legitimately do its work, and how the work should be done" (Freidson, 1970a). In the professions, the dominant source of the rules and criteria by which one is evaluated lay in the collegium, rather than in administration (Freidson, 1975).

If it is true that knowledge is power, no discussion of professions would be complete without considering the power equation. Professional groups often represent themselves and are commonly viewed as the creators and proponents of particular bodies of knowledge. As

Freidson stated, “Knowledge becomes power, and profession[s] stand as the human link between the two” (1986).

3.3. The Work of Eliot Freidson

Eliot Freidson has been a major contributor to the medical sociology literature for over 30 years. In that time, Freidson has followed the discourse of professions, professionalism, and professionalization, and contributed substantively to the understanding of these complex social phenomena. Freidson’s work is an artful combination of various perspectives, but with major emphasis on power, control, authority, and autonomy. Through the span of Freidson’s impressive career his perspective has evolved. While consistent in his interest and focus on autonomy, Freidson has developed a well constructed and optimistic view of the professions. The following is a summary of the portions of Freidson’s four books that deal most directly with professionalism, culminating in the development of an Ideal Type Professional, which serves as the conceptual framework of this paper.

3.3.1. Profession of Medicine (1970)

In his early work, Freidson, like many authors before and since, recognized the difficulty in generating a completely satisfying definition of a profession. In *Profession of Medicine: A Study of the Sociology of Applied Knowledge*, he noted that the “[o]ccupations to which the word has been applied are thus so varied as to have nothing in common save a hunger for prestige” (Freidson, 1970a). Freidson proposed that a profession is an occupation that has assumed a

position of dominance in the division of labor and gained control over the determination of the substance of its work. In short, the professions are *deliberately and officially* autonomous and self-directing. Freidson suggested, that medicine was the "prototypical" profession in the United States, and that the "better we understand medicine, then, the better we will be able to understand the problems that may be posed by the professionalization of the key service workers of the welfare state."

Following a discussion on the history of medicine and the evolution of medicine as a consulting (as opposed to a scholarly or learned) profession, Freidson made a case that the "most strategic and treasured characteristic of the profession" is autonomy. While he conceded that autonomy must ultimately be granted by the state, he suggested that this does not undermine professional control over the technical aspects of the work. "Autonomy over the character of his work, then, gives him the wherewithal by which to be a 'free' profession, even though he is dependent upon the state for establishing and sustaining his autonomy."

Freidson then discussed the medical division of labor, in which the physician is clearly the preeminent authority over all other workers. This premise led to an interesting discussion that has been an issue for nursing and other paraprofessionals attempting to professionalize over the last 40 years. Specifically, if the hallmark characteristic of professionalism is autonomy, and "the physician controls and influences his field and all who venture near it" (Hiestand, 1966), then how can such an occupational groups professionalize? Freidson contended that "to escape subordination to medical authority, [an occupational group] must find some area of work over

which it can claim and maintain a monopoly, but it must do so in a setting in which the central task is healing and controlled by medicine."

While Freidson clearly stated that autonomy is the central characteristic of a profession, he recognized that other distinguishing characteristics exist. The nature of the work must be of significant public interest and the profession organized in such a manner as to attain and maintain its position of control; it must have a prolonged period of training in abstract and complex knowledge; the occupation must help create the knowledge; and a service orientation must exist. While he conceded these prerequisites, he maintained that formal and deliberate autonomy is the key differentiation between the professions and other occupational groups.

To conclude the discussion on autonomy, Freidson discussed the role of self-regulation. "Just as autonomy is the test of professional status, so is self-regulation the test of professional autonomy." The privilege of self-regulation is justified by three main arguments. First, the work is of such a complex, technical, and abstract nature that no one outside the profession is qualified to evaluate or regulate it. Second, the profession claims it as their ethical responsibility to police its own ranks. Finally, the profession can be trusted to restrict or remove members who perform incompetently or unethically.

3.3.2. Professional Powers (1986)

In *Professional Powers: A Study in the Institutionalization of Formal Knowledge*, Freidson studied the institutions that provide professionals with their knowledge, a source of income,

organized political resources, and other mechanisms by which the professions transfer their formal knowledge into human activity. First, Freidson defined what he meant by formal knowledge. Formal knowledge is specialized and distinguished from the everyday/ commonsense knowledge that is acquired by large percentages of normal adults in the course of daily activities. Formal knowledge is shared only by a specific group of people performing certain kinds of activities. Formal knowledge is also of such complexity and sophistication that it is not attainable to those with only average, or even slightly above average, intellect. Theoretically, formal knowledge is only accessible to those with extraordinary academic and cognitive skills. Structurally, formal knowledge represents the subjects of research and teaching in the modern university. Freidson went on to discuss the pivotal role of the modern university in the creation and dissemination of formal knowledge.

Freidson spent considerable time in *Professional Power*s discussing how formal knowledge is translated into power, by citing Bell (1976), Eulau (1973), Lane (1966), and most extensively Habermas (1971). According to Habermas, formal knowledge can be used for the undemocratic exercise of power when political decisions are represented as technical decisions. In technical decisions, people tend to defer to "experts" for the right answer. Habermas suggested that with the expansion of formal knowledge there is an increasing tendency to rule by technique instead of public debate. "One can see a tendency, in short, away from democracy toward technocracy."

Freidson then briefly reviewed the literature to date, highlighting the problem of semantics in the study of professions and the lack of clear consensus on the definition of terms. Freidson briefly summarized the major theorists and focuses on the development of an operational definition of

professionalization in the US with particular emphasis on knowledge, power, and autonomy issues. He then used the U.S. Census categories to determine if they can practically be used to identify professions. He concludes that "the official categories of the census cannot be used to delineate a grouping of either professional or managerial occupations in any fashion that matches the intellectual interest and intent of those who are interested in new class theory."

The remainder of *Professional Powers* is primarily dedicated to identifying the components that define the professions based on the "intellectual intent of those interested." Freidson spent a chapter each on the discussion of credentialing systems; the roles that professional play in the legal system; organizations in which professionals work; and a political economy. Freidson also discussed the notion of professional decline and the institutional transformation of formal knowledge. As with his previous work, much of the emphasis in all these chapters is the exploration of the power, control, and autonomy equation.

3.3.3. Professionalism Reborn (1994)

In *Professionalism Reborn: Theory, Prophesy, and Policy*, Freidson (1994) addressed the practical question of how to control occupations whose specialized knowledge and skills deal with matters of significant concern to the community. While well grounded in theory, this work represented a shift toward the pragmatic use of theory. The basic premise of this work was that in modern post-industrialized society, there are a number of occupations that deal with matters of significant social import. While there is considerable debate about which occupations reach a theoretical threshold, the existence of a few such occupations is irrefutable. "With few and

recent exceptions…there seems to be rather remarkable unanimity about professions – agreement, first, that they represent a distinct kind of occupation which is of special importance to the effective and humane functioning of modern society, second, that they have been growing in number and importance throughout this century, and, third, that they will increase in number and importance in the future." Therefore, the book deals with the question, what is the best way to reasonably control these occupations?

Freidson "…propose[d] professionalism as a logically distinct and theoretically significant alternative to currently received models for conceptualizing the organization and control of work" of these occupations. He suggested that "the essential elements of professionalism are not disappearing, but rather are taking a new form. Professionalism is being reborn in a hierarchical form in which everyday practitioners become subject to the control of professional elites who continue to exercise the considerable technical, administrative, and cultural authority that professions have had in the past."

Freidson went on to state that "there is little evidence that the special status of the rank-and-file professionals will deteriorate so much that they will find themselves in the same position as the other workers. Even though they will be the subject of more formal controls than in the past, they will probably continue to have distinct occupation identities, rather than being mere jobholders. In all likelihood, they will also exercise considerably more discretion than other workers in performing their work, and will be able to participate in formulating standards and evaluating their own performance through some type of peer review. Finally, they will still enjoy at least occupational kinship with their superiors."

Parts two and three of the book considered the possibility of controlling the organization and control of professions bureaucratically, administratively, or in a market-based way. Freidson maintained that knowledge work in post-industrial society is not amenable to the traditional notion of management that pervaded the workplace of the previous century. Freidson asserted that professionalization is the process by which tasks, who performs them, and the way they are performed and evaluated, are controlled by the people who actually do the work.

He stated that, "the mechanism for organizing, controlling, and even coordinating, specialized labor to be found among professionals today – the authority of institutionalized expertise – may be far more useful for visualizing the substance of the Post-industrial Revolution than reliance on now-traditional notions of rational-legal authority and bureaucracy."

Freidson asserted that the most effective form of controlling a professional's behavior is through social pressure "which is constantly around him throughout his professional career." As Scott (1966) suggests "…professionals owe allegiance to their peers and to their profession. They seek to control their work in light of their own standards, while resisting the necessity of taking orders from bureaucratic superiors who assert the aims of the employing organization."

Given the conclusion that professions are here to stay, and that the ethos of professionalism is the best alternative to controlling their organization and work, Freidson introduced the concept of the ideal-typical model of professionalism, which formed the basis of his next book. He concluded with a discussion of how to "nurture professionalism."

3.3.4. Professionalism, The Third Logic (2001)

Freidson's *Professionalism: The Third Logic: On the Practice of Knowledge* (2001) represents the (to date) culmination of a 30-year study of medical sociology and the professions. In *The Third Logic*, Freidson developed and described an ideal type of professional, providing a useful theoretical framework with which to analyze occupational groups.

The ideal type was developed by the famous sociologist Max Weber as a conceptual tool to systematically analyze complex social systems. Weber recognized the challenges of studying social systems with infinite complexity. In analyzing such systems, the researcher is unable to control and manipulate human behavior, yet needs to understand the subjective meaning of human action while recognizing the difficulty of the true objectivity of studying human affairs (Robson, 2003).

The ideal type is an analytical construct that provides investigators with a standard against which to discuss similarities and deviations in more concrete terms. "An ideal type is formed by the one-sided accentuation of one or more points of view and by the synthesis of a great many diffuse, discrete, and more or less present and occasionally absent concrete individual phenomenon, which are arranged according to those one-sided emphasized viewpoints into a unified analytical construct" (Coser, 1977).

Weber's ideal type is a useful tool for the analysis of professions, and can be used to help identify the extent to which an occupational group has progressed toward professionalization.

While many authors use a variety of poorly defined terms such as semi-profession, para-profession, sub-profession, technician-professional, marginalized profession, etc., they are generally referring to the degree to which a group has moved toward the ideal type of professional--one that may not really exist.

Freidson's ideal type of professional has five dimensions: professional knowledge and skill; divisions of labor; labor markets and careers; training programs; and ideologies.

3.3.4.1. Knowledge and Skill

While control has always been a central theme in Freidson's work, he stated that there are certain prerequisites to the consideration of an occupation as a profession, for in fact a house painter has tremendous control over his work, but would generally not be considered a professional by most definitions. Prior to any other analysis, one must first consider the nature of the work. For an occupation to be eligible for consideration as a profession, the knowledge and skill necessary to conduct the work must be of a special character. The special character that he refers to may be expressed in a number of ways: the work may be fundamental to the well being of society; have great intrinsic cultural importance; be unusually complex or esoteric; and/or poor work can represent a danger to the public.

The essence of the special character of the work is the notion that the work is of such complexity and requires such a high degree of discretionary judgment that it does not lend itself to standardization. The work is also not easily evaluated using objective criteria and is so complex

that anyone outside of the profession is not qualified to judge competence. Abbott (1991) suggested that the nature of the work of the professional was specialized and cannot be standardized, rationalized, or "commodified."

Freidson states that the "monopolistic control is the essential characteristic of ideal-typical professionalism from which all else flows" and that "the ideal-typical position of professionalism is founded on the official belief that the knowledge and skill of a particular specialization requires a foundation in abstract concepts and formal learning and necessitates the exercise of discretion."

3.3.4.2. Divisions of Labor

The division of labor in this context refers to organization and coordination of the relations between workers performing different but interconnected specializations. According to Freidson's thesis, the division of labor of the ideal type professional is constituted and organized in distinctly different ways from other workers who are generally controlled by free markets or bureaucracies. Conceptually, the profession has control over the goals, terms, conditions, and criteria for evaluating performance. Operationally, this translates into control over the recruitment and training of new entrants to the profession; the conditions upon which they may enter the labor market; the procedures and criteria by which performance is evaluated; and the power to control the initial and continuing authorization to practice.

Freidson distinguishes between bureaucratic control, which relies primarily on the creation and empowerment of an administrative or managerial hierarchy, and the professional model, in which the work is controlled by the workers themselves. He asserts that the professions are differentiated more by specialization and prestigious skill rather than administrative ranks. The professional model of control relies on indirect control (e.g., restrictive licensing, formal training and educational requirements) and direct forms of social control (self-control, peer pressure, etc.).

According to Freidson, occupationally-controlled division of labor is an essential part of professionalism. "Specializations are stabilized as distinct occupations whose members have the exclusive right to perform the tasks connected with them. Functionally, related occupations negotiate with each other the boundaries or jurisdictions of the specializations that their members are allowed to offer and perform, often with some ambiguity when tasks overlap."

Some critics have pointed out the professions are in fact controlled and regulated by government. While the granting and enforcement of licenses is a state function, for the profession, it is the purview of the occupational group to control the criteria for the issuance and revocation of the professional license. Therefore, the occupation determines the individual qualifications necessary to perform particular tasks.

3.3.4.3. Labor Markets and Careers

Labor markets represent the connection between workers and labor consumers. According to Freidson, the heart of occupational control is the ability to determine the qualifications of new entrants to the occupational group. "This worker-controlled labor market is by definition one in which organized occupational groups have the exclusive right to determine the qualification for particular jobs and the nature of the tasks to be performed by individuals in those jobs. Their jurisdiction is established by the outcome of direct negotiations or struggles with other occupational groups that may claim to be able to perform the same or contiguous and perhaps overlapping tasks."

In the ideal type of professionalism, there exists a legal requirement to employ only those qualified by the occupation. There also exists a requirement that those presenting themselves for credentialing must have obtained the training as mandated by the occupation. In the ideal type, formal credentialing is the mandatory key to entry. "It is the official signal that labor consumers have no choice but to accept if they want the work it represents to be performed, for no one but those possessing it is allowed to perform it."

3.3.4.4. Training Programs

As stated earlier, one of the fundamental aspects of occupational control is a linkage of training to credentialing in that completion of an educational program becomes a prerequisite for entering the labor market.

While the role of knowledge and the role of universities are critical dimensions of professionalization, there is much more to the story. As the American university became the training ground for an increasing number of occupations, it became less useful to distinguish between occupational groups. "[While many] workers may be alike in possessing higher education, they are educated in quite different subjects and by quite different methods, they perform quite different kinds of work, and have quite different kinds of responsibilities" (Freidson, 1994). The mere existence of formal knowledge is inadequate to define the professions.

According to Freidson, "professional schooling is an indispensable component of the ideal type, but this is not solely because it produces the credential. It does much more than that. As an institution, it is also responsible for formalizing the particular kind of knowledge and skill claimed by an occupation and for providing an intellectual basis for its jurisdictional claims and its relation with other occupations. It is the factory that produces new knowledge and skill and, to some degree, tests and approves it. It is the authoritative source establishing the legitimacy of the practical work activities of the occupations' members, and it is the primary source of the status of its members and their personal, public, and official identities. It also contributes to the development of commitment to the occupation as a life career and to share identity, a feeling of community or solidarity among all those who have passed through it."

Freidson spends a great deal of time comparing and contrasting the characteristics of the ideal types of education of crafts, technicians, and professions. He then describes professional

education in terms of its impact on controlling the supply of the workforce, the nature of the professional curriculum, the professions control of the knowledge of the discipline, impact on occupational solidarity.

Freidson suggests that the professional education process changes the culture of the profession and breeds a strong sense of occupational solidarity. He identifies four ways professional education creates a strong sense of community. First, all who enter the training have aspired to that occupation. They have generally been chosen into competitive programs and have made considerable investment into the profession prior to entry. Second, students in the professions are characteristically trained in batches or cohorts, unlike apprentices who are trained individually. Third, students in the profession are separated as a group from other students and undergo a period of relative isolation for a significant period of time. Finally, the training and prerequisites are generally rigorous, resulting in a shared experience and indoctrination. These strategies create a strong bond between students that serve as a career long reference group, source of referrals, and consultation.

3.3.4.5. Ideologies

There is no intrinsic political or economic value to specialized formal knowledge and skill; professions develop ideologies as the primary tool to establish and maintain their status. According to Freidson, ideal type professions develop an ideology that is concerned with justifying their privileged positions, as well as the authority and status bestowed upon them.

Much of Freidson's previous work on autonomy and control are reinforced in this section of the book.

The major areas of ideology of concern to the profession are: commitment to work; specialization and production (especially when concerned with a lack of uniformity in the problems encountered in the work); educational ideology; and the goals of professionalism. Freidson provides a lengthy discussion on the nature of the education of those who are to become the political and economic elite and the service ethics of professionalism.

3.4. Summary and Significance

In 1996, *The EMS Agenda for the Future* proposed a new vision for the future of EMS, one that is proving to be difficult to attain and slow to realize. In some respects the *Agenda* calls for the emergence of a unique domain where EMS could claim exclusive expertise and greater practice autonomy.

The terms "profession", "professionalism", and "professionalization" are common in the rhetoric of the EMS community with many leaders espousing the virtues and need for further "professionalization." It is, however, unclear what exactly the EMS community means when it talks about the need for increased professionalization, and if this discussion is grounded in an understanding of the contemporary literature.

This study endeavors to identify which of the major themes of the professionalization literature commonly emerge in conversations with the directors of BDEMS programs. Content analysis will be used to identify which of the themes and elements from Freidson's five dimensions of professionalization are present and dominant among the study informants (Freidson, 2001).

Table 1. Major Themes in Freidson's Five Dimensions of Professionalization

Freidson's Five Dimensions of Professionalization	Major Elements of this Dimension	Major Theme
Knowledge and skill	The existence of formal knowledge of a special character (important, complex/esoteric)	Knowledge and skills of a 'special character'
	Decision making that requires considerable judgment and discretion in abstract circumstances	Complex and abstract decision making
Division of labor	Functional autonomy of practice	Functional autonomy
	A domain of formal knowledge and practice, over which the occupation can lay an exclusive claim of authority	Unique domain of expertise
Labor markets and careers	The occupation has control over the qualification of new entrants and the process of policing its own ranks	Self- regulation
	The occupation determines the future, goals, terms, conditions, and evaluation of the discipline.	Self-determination
	Formal credentialing, title protection, and a legal requirement to employ only those qualified by the profession	Legal recognition/ credentialing
Training programs	University-based educational programs are the mechanism for creating and disseminating the formal knowledge of the profession	University-based educational programs
	Completion of a rigorous and extensive educational program is required prior to entry	Rigorous educational process
	The content of the education is focused on the conceptual foundation of the profession	Education focused on theoretical foundation
	Commitment to the creation of formal knowledge (through research and scholarship) which may be of limited commercial value.	Knowledge generation and scholarship
Ideologies	Commitment to the work as a life long career	A sense of calling
	Sense of shared identity, community, and solidarity	Occupational identity
	A service ethic where the needs of the client are held above those of the practitioner	Service ethic/altruism
	Practice standards	Practice standards

This study is intended to identify which contemporary themes of professionalization are pervasive in the study informants. The study hypothesis is that some of the major themes,

especially in regard to functional autonomy, the creation of a unique domain of practice, and occupational self-determination will be largely absent from the notion of professionalization among BDEMS program directors.

This research will lead to recommendations that will enable BDEMS programs to play a more prominent, productive, and constructive role in the professionalization of paramedicine in the US, and to serve the EMS community by helping them to realizing the vision of *The EMS Agenda for the Future*.

4. RESEARCH PROCEDURES

The goal of this study is to determine how the directors of Baccalaureate Degree EMS (BDEMS) programs view the issues of professionalization and the role of BDEMS programs in the professionalization of paramedicine in the US. The data were obtained by one-on-one interviews with the directors of all 14 active US BDEMS programs.

4.1. Informants

Informants must be the permanent, acting, or interim Directors of functioning Baccalaureate Degree EMS Program (BDEMS) in the US. Two sources were used to identify BDEMS programs: the websites of the Journal of Emergency Medical Services (JEMS, 2004) and the Consortium of Academic Programs in EMS (CAPEMS, 2002). According to the JEMS website, as of September 26, 2004, there were thirteen operational BDEMS programs. According to the CAPEMS website, as of April 26, 2005, there were fourteen operational BDEMS programs.[2] As of the study period, it was determined that there were fourteen operational BDEMS programs, and therefore 14 potential informants.

The Principal Investigator contacted all individuals who meet the eligibility criteria by e-mail, telephone, or letter. The Principal Investigator screened all informants to assure that they met

[2] The CAPEMS website included Central Washington University, which was not listed on the JEMS website. The Principal Investigator contacted the program and confirmed that the program is operational. This was also confirmed by the program webpage and course catalog. A number of other program directors and local EMS personnel confirmed the operation of the CWU program.

the inclusion criteria. If any question arose as to the eligibility of the informant, the appropriate Dean or Chairman was contacted to verify the Directorship of the individual. All informants were at least 18 years of age, willing to complete a one-to-two hour interview (either face-to-face or by telephone) and were able to speak and understand English. There were no exclusion criteria for this study.

4.2. Data Collection

The Principal Investigator conducted all of the interviews. Attempts were made to determine if a face-to-face meeting was possible within the data collection period (pilot study September – October 2004, main study May-July 2005). If the informant was available during one of the professional meeting at which the principal investigator was conducting interviews (2004 National Association of EMS Educators Annual Symposium (September 7-12, 2004) in Los Angeles, CA; EMS Expo (October 21-23, 2004) in Atlanta, GA; NREMT Exam Item Writing Meeting (May 5-6, 2005), Portland, OR), a mutually convenient time for a face-to-face interview was scheduled. If a face-to-face meeting was not feasible, a mutually convenient time for a telephone interview was scheduled. Each informant was asked to schedule 1-2 hours for the interview.

In accordance with the IRB requirements and approved protocol, an introductory script for each interview was read to each informant (Appendix A). An interview guide served as an outline of the discussion (Appendix B). The outline served as a guide for queries and prompting. Specific questions were designed to facilitate focused discussion and optimize consistency across

interviews. These questions were developed from the literature review and pilot tested in September-October 2004. The same interview guide was used for both face-to-face and telephone interviews. Each interview lasted 1-2 hours and was audio taped. Upon completion of the interview, all informants were asked to complete a brief demographic survey (Appendix C).

4.3. Qualitative Analyses

Content analysis was used to evaluate and analyze the information gathered during the interviews. The analysis was based primarily on transcripts of the audiotapes, and secondarily on notes taken by the interviewer and recall. The analysis process includes the following:

1) Summarize the informant's responses;

2) Identify key phrases and quotes; and

3) Identify themes and trends relevant to the issues of professionalism and professionalization of paramedicine among the informants.

4.4. Ethical Considerations

Informants were informed that they may withdraw from the study at any time. There were no risks to informants. It is expected that informants' responses may improve Emergency Medical Services education.

The Principal Investigator was responsible for ensuring that all informants fully understood the nature and purpose of the study. Informants were read an introductory script describing the nature of the research project so they could make a fully informed decision to participate or not.

The confidentiality of study informants is maintained through the use of unique, randomly assigned, numerical identifiers. Documents linking the informant's name to the unique identifier codes are kept in a locked filing cabinet in a locked office, separate from any other study related materials.

Because the study population is small, the transcriptionist and/or Principal Investigator made attempts to removed any references that could be attributed or traced to an individual or an institution. Only the unique informant ID was recorded on the informant questionnaires.

4.5. Regulatory Considerations/Institutional Review Board (IRB) Approval

This study was designated as exempt by the University of Pittsburgh Institutional Review Board.

Records will be retained by the Principal Investigator for a minimum of 2 years.

5. FINDINGS

Interviews were conducted on all 14 potential informants, representing a 100% participation rate. Four (29%) were conducted as face-to-face interviews and 10 (71%) were telephone interviews.

5.1. Informant Demographic Characteristics

All participants were asked to complete a demographic questionnaire (Appendix C). Informant demographic characteristics are presented in Table 2.

Table 2. Informant Demographic Characteristics

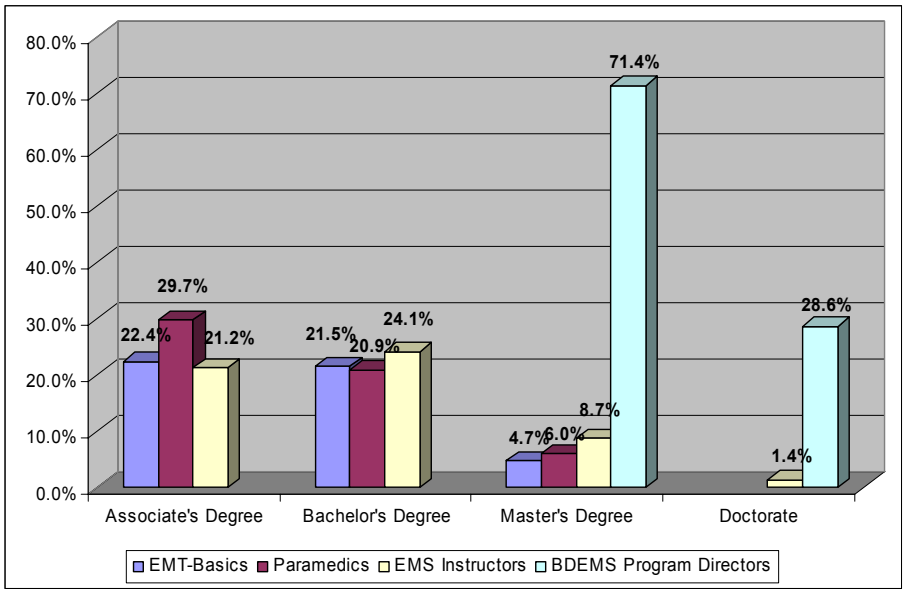
Characteristic	Sample (N=14)
Gender	
n (%) male	9 (64.3%)
n (%) female	5 (35.7%)
Highest degree	
n (%) Master's	10 (71.4%)
n (%) Doctorate	4 (28.6%)
Were you ever a Paramedic?	
n (%) yes	12 (85.7%)
n (%) no	2 (14.3%)
Years of Paramedic Experience	
Mean $\pm$ SD	16.7 $\pm$ 11.2
Median	18
Range	0 – 34
Other Health Care Experience	
n (%) RN	3 (21.4%)
Years in Academics on a Full Time Basis	
Mean $\pm$ SD	16.0 $\pm$ 6.5

Median	16.3
Range	5.5 – 26
Current Academic Rank	
n (%) Professor	3 (21.4%)
n (%) Associate Professor	3 (21.4%)
n (%) Assistant Professor	5 (35.7%)
n (%) Instructor	2 (14.3%)
n (%) Lecturer	1 (7.1%)

The gender of the informants in this sample (64.3% male) was similarly distributed to the proportion of males among EMS personnel (71.2% of EMT-Basics and 69.0% of Paramedics male) (Brown *et al.*, 2002) and EMS educators (72% male) (Rupel *et al.*, 2005).

Not surprisingly, the BDEMS program directors represent a more educated group than either EMS personnel or EMS instructors as a whole. Only 4.7% of EMT-Basics and 6.0% of Paramedics have received a graduate degree (Brown et al., 2002); 9.1% of EMS instructors have attained a graduate degree (Rupel et al., 2005). All of the BDEMS program directors have a graduate degree, with 4 (28.6%) having earned a doctorate (see Figure 2). Not only are the BDEMS program directors comparatively well educated, they have considerably more clinical experience (median=18.0 years) than Paramedics in the EMS population overall (median 9.12 years) (Brown et al., 2002).

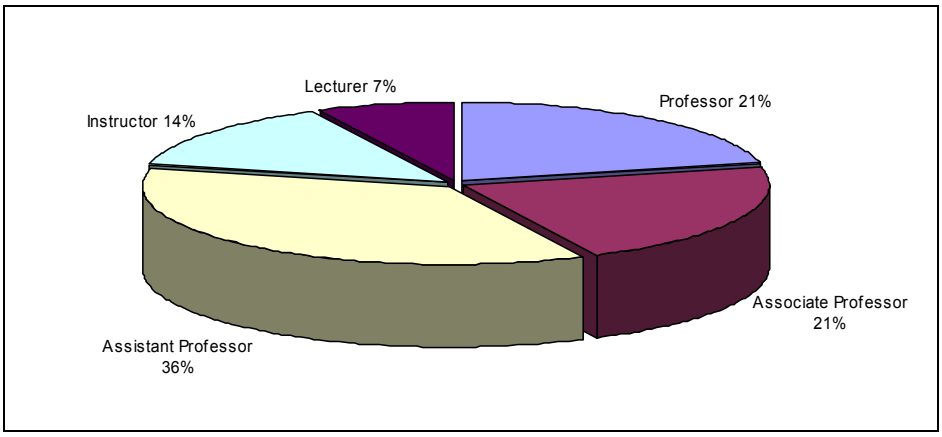
Figure 2. Highest Level of Education Attained of Various Segments of the EMS Community



While relatively well educated in comparison to the EMS community overall and EMS instructors, BDEMS program directors are generally less credentialed than their colleagues in other allied health disciplines. According to a 2004 survey conducted by the Association of Schools of Allied Health Professions (ASAHP), 55.4% of the directors of all allied health education programs had earned a doctoral degree (Association of Schools of Allied Health Professions, 2004). Only 29% of BDEMS program directors have earned a doctorate.

While more than two-thirds of EMS instructors overall work as educators on a part time basis (Rupel et al., 2005), all of the BDEMS program directors were full time faculty members. BDEMS program directors tended to have been teaching longer (17 years) than EMS instructors (11 years) (Rupel, 2005) or other allied health program directors (11 years) (Association of Schools of Allied Health Professions, 2004). Figure 3 presents the distribution of academic ranks of the informants.

Figure 3. The Academic Rank of BDEMS Program Directors



Summary of Demographic Findings:

- BDEMS program directors are predominantly, but not disproportionately, male.
- In comparison to EMS personnel and EMS instructors in general, BDEMS program directors are highly educated and clinically experienced.
- A smaller percentage of directors of BDEMS programs have earned a doctoral degree than the directors of other university-based allied health educational programs (29% vs. 55%).
- 79% of BDEMS program directors hold a professorial faculty rank; 21% have earned the full professor rank.

5.2. Research Question #1: What is a Profession?

The first research question is: 'How do the directors of BDEMS programs define a profession? What traits/characteristics or types of relationships do they associate with an occupation that is

viewed to be a "profession"? How does this compare to the major themes of professionalization in the contemporary literature?'

Two interview questions ("How do you define a profession?" and "What do you feel are the characteristics of an occupation that is viewed as a profession?") were asked related to this research question. Responses to these two interview questions are summarized in Table 3 and Table 4.

Table 3. Interview Question #1

How do you define a profession?	
Participant ID	**Response**
24	Extensive, university-based education.
29	A group that has a special knowledge base and expertise.
37	Common work activities and values; the existence of performance and educational standards.
40	University-based educational programs, organization, research, and self-regulation, body of knowledge.
44	Unique knowledge base, responsibility/accountability.
46	Specialized knowledge, societal recognition, self-regulation/complete independence, organization, group identity, education and specialized skills.
52	Organization based on science, standards, monitors those standards, conducts research.
55	Self regulation, ethical code of conduct, committed to generating and producing scholarly research, critical thinking, moral judgment.
58	Scientific body of knowledge, education/internship/credentialing process, self regulation.
65	Altruistic motivation and the internalization of the organization/professional norms, something terminal.
72*	Link to college education.
81*	Set of ethical, practice and behavior standards.
83*	Education and skill not commonly possessed, self directed, ethical standards, licensing/certification.
87	Guidelines/standards of care, national certification, continuing education.

* Pilot test subject.

Table 4. Interview Question #2

What do you feel are the characteristics of an occupation that is viewed as a profession?	
Participant ID	**Response**
24	University degree at the bachelor's degree
29	University-based education
37	Identifiably
40	*Question not asked of this informant*
44	*Question not asked of this informant*
46	Education that is both specialized yet surrounded by more general education
52	Academic base and formal academic credential (diploma or certificate), licensure, continuing education
55	The line between an occupation and a profession is quantitative; at some point you cross the line in terms of amount of training and amount of specialized study, self regulation, organization, public relations, professional identity
58	I do (yes), but a lot of people in the community do not
65	Amount of remuneration for services rendered, a level of expertise (education), some sort of accreditation of the individual (credentialing)
72	Independent practice
81	Educational requirements, certification/license/registration, governing body/association, code of ethics
83	Knowledge and skill not commonly held, code of ethics, professional standards, licensing and regulation
87	*Question not asked of this informant*

5.2.1. The BDEMS Program Directors Definition of a Profession

Most of the BDEMS program directors defined a profession in terms of a number of functional characteristics. Typical responses were:

- "Well, I define it from three aspects. One being that the profession has a distinct knowledge base that is distinct to their particular discipline…There is a component to the profession that they have a responsibility to…administer that knowledge or utilize that knowledge and information…The third arm is…accountability to the people they serve, to the profession, to themselves and so there is distinct knowledge to that discipline, there is responsibility in terms of administering that knowledge and then accountability that that is done in a professional, ethical, and safe way." (44)

- "I stick to the standard of probably a textbook definition of a profession being one that is self regulated, is guided by ethical code of conduct, and is committed to generating and producing scholarly research to its practice." (55)

Ten (71%) informants stated that there were multiple characteristics which define a profession; four informants initially stated that only one characteristic distinguished a profession from those occupational groups not generally considered a profession. These characteristics were: university-based education; specialized knowledge and skill; independent practice; and performance standards. When probed with questions such as, "would any occupational group that has [specific characteristic] be considered a profession?" three informants (those identifying specialized knowledge and skill, independent practice, and performance standards) expanded their definitions to include other characteristics. The single informant who defined a profession in terms of a university-based education remained steadfast in his conviction that this is the only distinguishing characteristic.

5.2.2. Themes from the Contemporary Literature in the BDEMS Program Directors Definition of a Profession

In answering the first two interview questions, themes from Freidson's Five Dimensions of Professionalization emerged 56 times. At least one informant identified every major theme of Freidson's dimensions of professionalization, with the exception of a "sense of calling." Despite the diversity of the responses, no clear pattern or trend emerged. Not one single theme had more than half of the informants identify it as part of the definition or characteristics of a profession. This finding may reflect differing views on what characterizes a profession and what

distinguishes a profession from other occupations. Table 5 summarizes the frequency of references to Freidson's major themes.

Table 5. Frequency of Identification of Freidson's Major Themes of Professionalization

Major Theme	% (n) of informants citing this theme
Rigorous educational process	50% (7)
Legal recognition/ credentialing	50% (7)
Self- regulation	50% (7)
University-based educational programs	43% (6)
Knowledge and skills of a 'special character'	43% (6)
Practice standards	43% (6)
Knowledge generation and scholarship	21% (3)
Occupational identity	21% (3)
Unique domain of expertise	14% (2)
Self-determination	14% (2)
Service ethic/altruism	7% (1)
Complex and abstract decision making	7% (1)
Functional autonomy	7% (1)
Education focused on theoretical foundation	7% (1)
A sense of calling	0% (0)

5.2.2.1. Rigorous Educational Process

Half of the informants identified a rigorous educational process as part of the definition or as a characteristic of a profession. Examples of typical comments regarding rigorous educational process in the context of professions made by informants were:

- "At some point there is a point at which you cross the line in the profession that there probably is an increased amount of training and there is an increased amount of specialized study that is required…I think ultimately it comes down to an issue of quantity. In particular the quantity of education that is required." (55)

- "…there has to be a certain defined level of education in order to be considered a profession." (72)

- "… [in a profession, the] education is highly specialized in an area and yet that is surrounded with more of a general education…. Both of those pieces are important to professionalism. I think if you only have the specialized knowledge that that is more of a vocational type of education; the liberal arts and humanities that accompany that I think are important to giving a well rounded education and [preparing] a person who can probably operate in a variety of situations." (46)

Since they represent educators, it is not surprising that half of the informants equate a rigorous educational preparation with a profession. What is surprising is that half of informants *did not* cite rigorous or university-based educational preparation as an essential characteristic of professions.

In addition, most informants commented about the quantity, rather than the quality of education. The literature discusses not only a length of an educational program, but the fact that the education of professions is demonstrably *different* in *quality* than other occupations. The professions literature discusses the fact that the educational process is essential to the indoctrination of professional attitudes, socialization of the individuals to the norms of the profession, and the role of a cohort training model which imparts a sense of shared experience upon its participants. None of these concepts emerged in the interviews.

A number of the informants commented about the benefits of a broad-based liberal arts approach to the educational process. It was clearly recognized by some of the informants that professional education is a matter of *both depth and breadth*. There was general support for a curriculum that reflected a liberal arts approach, as suggested by the comment, "our students learn about platelets and Plato…we try to make more rounded individuals rather than just making them clinically

competent" (81). There were no comments advocating a more focused or narrow educational experience.

5.2.2.2. Legal Recognition/Credentialing

Half of the informants identified a legal recognition/credentialing as part of the definition or characteristics of a profession. Examples of typical comments regarding legal recognition/ credentialing in the context of professions made by informants were:

- "The most important thing is an entry-level education requirement and some type of certification or licensing." (81)
- "…There are national certification policies, testing a level of competence that can be assessed." (87)

Occupational regulation is designed to protect the public's health, safety, and welfare. Despite that premise, most requests for regulation occur from within a profession or trade association, often to gain economic benefits derived from the power to establish standards, the power to restrict competition, and as an avenue for receiving reimbursement (Schmitt & Shimberg, 1996).

In most states, the governmental regulation of EMS practice is handled differently than in other health professions. The most common model for the regulation of EMS personnel is through the issuance of certifications by a state EMS Office. Independent regulatory boards, while used in a few states, are relatively rare in EMS. As a result, great confusion exists in the EMS community regarding the roles, similarities, and differences between certification, licensure, and registration. The *National EMS Education Agenda for the Future* (National Highway Traffic Safety

Administration, 2000a) calls for a more traditional occupational regulatory system for EMS. In this system, national certification serves as the basis for state licensure.

Given the focus on occupational regulation and the debate in EMS regarding certification and licensure, it is understandable that half of the study informants would have identified that as part of the difference between professions and other occupations. As one of the study participants stated, "for us to continue to move forward, we need to have national recognition, national guidelines, national acceptance of certain educational qualifications.… The word paramedic needs to mean the thing same across the board, like the word physician means the same across the board." (87)

5.2.2.3. Self-regulation

According to Freidson (2001), "occupationally controlled division of labor is an essential part of professionalism." This is based partially on the notion that the domain of practice of the profession is so complex, esoteric, and/or specialized that no person outside of the profession is qualified to judge the competence of another member of the profession. In the ideal-type, the profession itself determines the qualifications necessary to perform and has exclusive control over the criteria for entrance and licensure.

Half of the informants identified self-regulation as part of the definition or characteristics of a profession. Examples of typical comments regarding self-regulation in the context of professions made by informants were:

- "…In the profession it should be those individuals who make up that body of knowledge and skills and attitudes regulating themselves." (40)

- "in [state] we have thought about developing a board of paramedicine-a board of paramedics to get the administration out of state government. More similar to the board of nursing where we would regulate ourselves. We were looking at the different professions that have such boards…even cosmetology has their own board. There are a lot of organizations and disciplines that if people just heard the word they would say 'well that is just a group of people' but in reality they are much more organized and really are defining themselves more as a profession than what we are." (52)

- "In the self regulating nature of a profession is important to note that it is not subordinate to another profession; it is completely independent." (46)

A variety of themes emerged in the discussion of self regulation. One informant (83) stated, "By controlling access to the profession you have certain abilities to control and elevate income. It is not pure selfish interest with income--you are also looking to attract a better quality person.… So that by elevating the quality of the people you attract, you have also resulted in better patient care, and better professional performance of standards and so forth," this comment seems to reflect a positive view of self regulation.

5.2.2.4. University-based Educational Programs

Six of the informants (43%) identified the existence of university-based educational programs as part of the definition or characteristics of a profession. Examples of typical comments regarding university-based educational programs in the context of professions made by informants were:

- "One of the most important attributes of a profession is its link to education. In order to define a profession, a professional, they should have a certain degree of education, and that is linked to a college education." (72)

- "I would determine and define a term profession as a career path that requires extensive academic preparation.… Extensive academic preparation means on a college level, university level." (24)

5.2.2.5. Knowledge and Skills of a 'Special Character'

Six of the informants (43%) identified the knowledge and skills of a 'special character' as part of the definition or characteristics of a profession as evidenced by the following typical comment: "[professionals are…] Groups of people that have a special knowledge base and expertise and have developed the ability to apply that knowledge base and expertise in their particular setting." (29)

5.2.2.6. Practice Standards

Six of the informants (43%) identified practice standards as part of the definition or characteristics of a profession. Examples of typical comments regarding practice standards in the context of professions made by informants were:

- "There are certain standards and guidelines and dictate the performance." (87)
- "I would define a profession as an occupation that has a set of standards, guides in practice and ethics and behavior of the individuals within that occupation." (81)

5.2.2.7. Knowledge Generation and Scholarship

Three informants (21%) identified research or knowledge generation and scholarship as part of the definition or characteristics of a profession. Examples of typical comments regarding

research or knowledge generation and scholarship in the context of professions made by informants were:

- "[Professions must have] ongoing knowledge, ongoing research that supports the growth of the knowledge base." (29)

5.2.2.8. Occupational Identity

Three informants (21%) identified occupational identity as part of the definition or characteristics of a profession. Examples of typical comments regarding occupational identity in the context of professions made by informants were:

- "A profession is defined by a set of common work activities, a set of common values." (37)
- "[Professions] are not motivated by the exchange of services or goods for an amount of money, but because they identify with the organization's goals, they actually *become* the organization or that profession's goals. The essence of that organization or that profession is internal or internalized in that person." (65)

5.2.2.9. Unique Domain of Expertise

Only two informants (14%) identified the existence of a unique domain of expertise as part of the definition or characteristics of a profession. A typical comment regarding the unique domain of expertise in the context of professions was:

- "[A] profession has a distinct knowledge base that is distinct to their particular discipline." (44)

5.2.2.10. Self-determination

Two informants (14%) identified self-determination as part of the definition or characteristics of a profession. Examples of typical comments regarding university-based educational programs in the context of professions made by informants were:

- "it is viewed against us to become more of a profession and professional by those who want to keep us at a certain level so that they do have that power and control.… Some other disciplines are fearful if we come together as one.… So, the best way to keep a profession down and to keep control and keep everything in disorganization and inconsistency." (52)

- "With the [title] profession comes a responsibility to take control of your own destiny." (72)

5.2.2.11. Service Ethic/Altruism

Only one informant (7%) identified a service ethic or altruism as part of the definition or characteristics of a profession.

5.2.2.12. Complex and Abstract Decision Making

Abbott (1988) suggests that the major distinguishing characteristic of the professional is the level of abstraction in the decision making. For crafts, he notes that the occupational group controls the techniques of the discipline. Professions, on the other hand, view practical skills as an extension of the mastery of abstract knowledge. For Abbott the "characteristic of abstraction is the one that best identifies the professions.… Only a knowledge system governed by abstraction can redefine its problems and tasks, defend them from interlopers, and seize new problems." He goes on to state that "…abstraction enables survival in the competitive system of professions."

One informant (7%) identified the existence of complex and abstract decision making as part of the definition or characteristics of a profession. "A profession is a bit different in that it also involves intellectual activity. It involves critical thinking, maybe even moral judgment…because it is trying to match its service to the needs of the community." (55)

5.2.2.13. Functional Autonomy

The US health care system provides an interesting microcosm to study power struggles in the workplace in that the health care environment consists of many occupational groups and is highly hierarchical. In the stratified system of health care workers, occupational groups occupy different levels of prestige, but are all less than that given to the physician.

On the one hand, Freidson (1970a) observed that allied health professional ranks tended to be ordered by the required length and type of training. The longer, more formal, and more university-based the education was, the higher the position of the occupational group. The amount of education alone however cannot account for all of the factors that affect the relative prestige of the many allied health professions. One of the major variables affecting inter-occupational stratification seems to be functional autonomy, or "the degree to which work can be carried out independently of organizational or medical supervision, and the degree to which it can be sustained by attracting its own clientele."

The dilemma of establishing an autonomous area of practice in a health care setting was discussed by Freidson (1970b), and illustrated by the evolution of modern nursing. From the beginning of the modern era of nursing, Florence Nightingale insisted that nurses not undertake any service on their own initiative, but only under the order of a physician. Therefore, all nursing work flowed from the doctor and became a subset of physician practice. While tying itself to the coattails of physicians originally offered nursing a degree of dignity, it became clear as both nursing and medicine evolved that it would limit nursing as a profession. In the 1950s, nurses became increasingly interested in finding new and independent positions in the division of medical labor.

The major shift in nursing was made possible by tremendous growth in the technology, complication, and quantity of tasks performed at the patient's bedside. Physicians were no longer able to manage all aspects of patient care, and nurses assumed larger and more independent roles. Specialties of nursing developed and the licensed practical nurse emerged as a technical level of nursing. It would be difficult for nursing to claim autonomy when the technical skills they perform are ultimately contingent upon the judgment of a superordinate profession. By passing on what were traditionally considered nursing skills to lesser trained workers, nursing defined a unique area of practice upon which they were able to claim exclusive domain and expertise.

This dialectic remains the dilemma of any allied health occupation attempting to professionalize. Specifically, to escape subordination the occupation must find some area of work over which it can claim authority. Unfortunately, this is difficult to do in an environment that is legally

controlled by physicians. To attain the autonomy of a profession, an allied health occupation must control a discrete body of medicine and be able to practice within that domain without routine contact or dependence on physicians.

Only one informant identified functional autonomy as part of the definition or characteristics of a profession. "A professional is an educated individual who has a college degree, who works in a profession, who basically is autonomous or independent and can make their own decisions …Whereas an occupation is more driven by a more rigid set of rules and standards…[members of a profession have] a lot more latitude in the profession whereas in an occupation you have to conform to a more rigid set of standards and guidelines." (72)

5.2.2.14. Education Focused on Theoretical Foundation

Only one informant identified education focused on theoretical foundation as part of the definition or characteristics of a profession. "If you only have specialized knowledge, than that is more of a vocational type of education. The liberal arts and humanities that accompany [other class work] are important to giving a well rounded education and [preparing] a person who can operate in a variety of situations." (46)

5.2.2.15. Sense of Calling/Altruism

No informant identified a sense of calling as part of the definition or characteristics of a profession.

5.2.2.16. Themes Identified by Informants That Are Not Significant Themes in the Contemporary Literature

In addition to Freidson's major themes of professionalization, seven additional themes were identified, with three of them referenced by more than one informant (see Table 6)

Table 6. Frequency of Additional Themes Identified by Informants

Major Theme	% (n) of informants citing this theme
Organization/association	29% (4)
Social recognition	21% (3)
Continuing education	14% (2)
A terminal goal	7% (1)
Identifiably	7% (1)
Public relations	7% (1)
Salary	7% (1)

Four informants identified the existence of an organization or association and three informants identified social recognition as part of the definition or characteristics of a profession. Examples of typical comments social recognition in the context of professions made by informants were:

- "It is perception of people that see us as a profession and that is probably just as important as how you see yourself." (81)
- "I think regardless of the body of knowledge unless you are recognized by society as a profession, it is kind of hard to be considered a profession." (46)
- "[the profession] gained the trust and respect of society in the domain they have elected to work" (40)

Two informants identified the existence of continuing education as part of the definition or characteristics of a profession.

It is important to note that some of the themes of professionalization came up later in the interviews.

5.3. Research Question #2: Does Paramedicine Qualify as a Profession?

The second research question was: 'In what ways, if at all, do the directors of BDEMS programs think that paramedicine is (or is not) a profession? Do they believe that paramedicine should be (or should become) a profession? Do they view this to be a positive and/or negative thing (for Paramedics, EMS in general, the employers of Paramedics, patient care) and why?'

Seven interview questions ("Do you consider paramedicine *to be a* profession?", "Do you think that paramedicine *should be* (or should become) a profession?", "Do you think that the professionalization of paramedicine is a positive or negative thing?", "What do you think will be the effect of the professionalization of paramedicine on paramedics?", "What do you think will be the effect of the professionalization of paramedicine on EMS in general?", "What do you think will be the effect of the professionalization of paramedicine on the employers of paramedics?", "What do you think will be the effect of the professionalization of paramedicine on patient care?") related to this research question. Responses to these seven interview questions are summarized in Table 7, Table 8, Table 10, Table 11, Table 12, Table 13, and Table 14.

During the interviews, care was taken to make a clear distinction between characteristics of an individual who is considered a professional and a profession. Clearly, this nuance was occasionally missed by a few of the informants. Some informants occasionally slipped into referencing individual professionals. This was typically handled by investigating the informant's view of the relationship between a profession and a professional. The following interaction was fairly representative of a number of discussions that emerged in the interviews.

> 58: I think a lot of the folks that are field practitioners certainly want to be thought of as professional.
>
> GM: …is the notion of and the relationship between a profession and the professional. How would you define those two things? A profession compared and contrasted to a professional, if you will.
>
> 58: Well, I mean a professional obviously is just a person who practices within the profession.
>
> GM: … is it possible for someone to be a professional if they are not a member of a profession?
>
> 58: Well, I believe so if we want to look at traits and characteristics of a person as opposed to a career path…
>
> GM: …one definition you mentioned is that a professional is someone who is a member of an occupational group that is considered to be a profession. Is that correct?
>
> 58: Yes.
>
> GM: You also said that it is possible for an individual to be a professional if they are not a member of an occupational group considered to be a profession. Or is that impossible?
>
> 58: Well, I think they can have professional qualities or professional traits.
>
> GM: Ok, ok, good.
>
> 58: …those would be the things, kind of the descriptive terms that we use, people who are professional based upon their interaction with the public, empathy, you know those kind of characteristics.

GM: What other ones, you said empathy, ahh

58: …empathy, honesty, compassion, I guess you could even throw out, kind of the Boy Scout creed there. Loyal, thrifty, reverent, brave and so forth. But thinking about paramedics, obviously there are going to be things like compassionate, empathy for the patient, concern for the patient, the patient's family, you know, concern for their partners and even their profession as a whole. There are just lots of traits to describe the person as being a professional but somewhat different from characterizing a career as being a professional career.

In this way, the majority of the interviews remained focused on the issues of a profession and avoided lengthy discussions about individuals considered to be a professional. As another participant (65) commented, "You can certainly have a group of professionals but that doesn't necessarily mean there is a profession either. Because a profession is defined by more than an individual or even a group of individuals. I think there is a cultural and societal structure that lends itself toward [being a profession]."

5.3.1. Is Paramedicine a Profession?

The questions in the next phase of the interviews were intended to determine to what extent BDEMS program directors feel that paramedicine is a profession.

Table 7. Interview Question #3

Do you consider paramedicine *to be a* profession?	
Participant ID	**Response**
24	Yes. The level of decision making requires bachelor's level analysis and thinking skills.
29	A developing profession.
37	A tentative yes.
40	We are not there yet.
44	Yes.

46	Striving to be a profession,
52	A profession in its infancy.
55	Not yet. I am continually surprised as the resistance.
58	A rising medical profession.
65	No.
72	I personally don't think we are at that level.
81	Yes and no, has some of the elements, however it is a technical field and education in minimal.
83	Yes, but not at all levels.
87	Not yet. State and regional variations.

Some representative comments were

- "it became real clear to me really early on that this discipline of practice was very much different than other health care professions and that there is a very distinct knowledge base separate from physicians, nurses or other health care providers that is unique to this group. I think that we certainly over time have allocated more and more responsibility to paramedics…. Accountability is a side of this arm that is a little different than for most professions where accountability is held by the individual because they happen to be in a health professions license where paramedics are certified and they are linked to their medical program director. But yes, I do believe that paramedics are professionals and it is a profession." (44)

- "…one could argue that EMS hasn't risen to the level of professionalism because we don't necessarily have all three [scientific body of knowledge, credentialing process, self regulation] of those components…I don't think we have quite attained all three of those components. Certainly not to my satisfaction. But we have certainly made lots of inroads toward accomplishing all of those within the last several years. I certainly think that we are going to attain all three of those legs eventually." (58)

- "I don't believe so and I think a good part of that is the lack of education, the lack of the autonomy, the lack of the independence and so forth and…they fit more into the mold of the occupation…[we are] identified as more of a public safety profession than an allied health profession. Our two biggest problems to move us to the profession are 1) education and 2) getting us out of the public safety mold and moving us to an allied health profession." (72)

Three (21%) informants currently consider paramedicine to be a profession. One informant cited the level of analysis and decision making skills necessary to function as a paramedic. Another commented that he felt that the shared accountability for paramedic practice, while "necessary

for now…will decrease over time." The final informant who provided an affirmative answer was asked if he "felt that EMS was a profession" (since he was a pilot test informant). His answer, "yes but not at all levels" indicated that he felt that paramedicine is a profession, but that lower level EMS personnel were not. This is an interesting notion that will be discussed in further detail later in this paper.

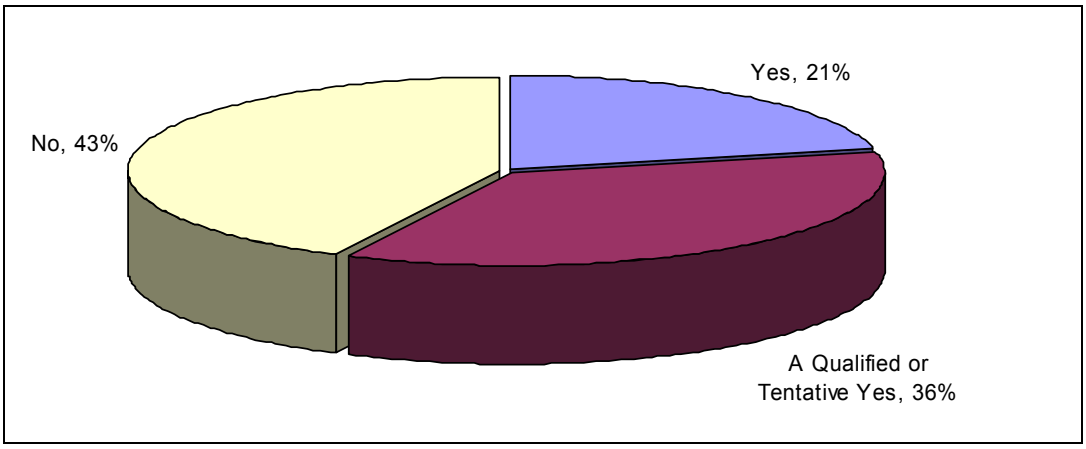
Five (36%) of the informants answered a tentative or qualified yes to the question, "Do you consider paramedicine to be a profession?" Of these, three answers reflected the notion of an immature profession ("a developing profession", "a profession in its infancy", and "a rising medical profession") implying that, in their minds, paramedicine is undergoing the process of professionalization. Typical comments reflective of some level of ambivalence (even by some informants who responded that paramedicine is a profession) were:

- "[paramedicine is] striving to be a profession; I don't think it is there yet. It is caught in between a vocation and a profession." (46)
- "I look at respiratory therapists. Respiratory is probably in their infancy stage but they now have a much more cohesive national group and cohesive state groups. They have licensure, legislation, and strong lobbying groups. They base their practice on decisions made within the respiratory therapy group; they have best practices, they are starting to move to Baccalaureate programs…now [they] need to move people to the graduate level in order for them to continue to control their own advancement…. I look at us and I say we have little bits and pockets and pieces and we have people taking us forward but yet we have this whole group also that is sitting there taking us back." (72)

Six (43%) of the informants indicated that they did not feel that paramedicine currently qualified as a profession. One informant's answer was particularly insightful and reflected an understanding of the political nature of the question. "I am not opposed to saying we are

professionals, but in terms, in the context of the bigger picture of what that all means, in comparison to those who truly are, we are not there yet." Figure 4 illustrates the responses.

Figure 4. Do you consider paramedicine to be a profession?



While most informants had a number of ways in which they felt that paramedicine is and is not a profession, a number of the informants commented on issues related to autonomy, self-regulation, self-determination, and lack of professional identity. Examples include:

- "I think probably one of the biggest detriments to us, to become a profession is the states that want to hold [us] back or lower the bar and screw up the national plan." (81)

- "what is lacking in EMS is that it is not self regulating… our structure still unfortunately is regulated by the National Association of EMS Physicians, State Medical Directors and training coordinators so we are not our own regulatory group for what we do in the profession. We are regulated by others." (40)

- "I think the main one is that we actually determine our own destiny. We actually determine what is best for EMS. Instead of right now the fire service determining what is best for EMS because and you know, again it an experience that you know in [state] is that the fire service is driving EMS and they really don't understand EMS. But yet they are still driving it." (72)

- "[the] accountability arm for EMS is shared between the practitioner, the EMS provider, the paramedic and the medical program director. So that accountability piece is not just solely held by that individual paramedic and so I still think you

accountability is there but it weighted a little bit differently because it split between two different people or entities in the way that the organization structure at least works in our state." (44)

- "Strong national groups that actually make decisions for their own profession. We don't. We don't have strong groups that EMS personnel can belong to that actually can make these decisions." (72)

- "I have found it alarming during 9/11 that they would talk about fire, police, nursing but when they got to EMS they really never had a name for us. Emergency medical (pause), they would say. You could tell they were stumbling, trying to find our identity. They never really said EMS, EMTs and I think that has, it has been one of our weaknesses and continues to a weakness in that we really don't let the public know what we do." (52)

- "We also lack a professional identity. I think we have made that identity difficult because we have so many names, and so many levels, across the nation that people have the perception now that if EMS arrives everybody is a paramedic. There was one study that years ago said that there were 40 different some types [of EMS personnel]…if a profession is truly going to evolve into a profession they have got to identify themselves and they have got to evolve into one cohesive group of individuals." (52)

- "people would have a more common definition or a more common thought of 'OK, this is what a paramedic is'" (52)

5.3.2. Should Paramedicine be a Profession?

In contrast to the previous question regarding whether the informants considered paramedicine to be a profession, the next question was intended to determine if the BDEMS program directors feel that paramedicine *should be* a profession. Of the fourteen informants, twelve (86%) felt that paramedicine should be a profession. The two that did not answer in the affirmative provided interesting thoughts: "I think it can become a profession"; the other stated "there is a role for a pre-hospital professional; I'm not sure if that should be a paramedic or if we should create another level."

Table 8. Interview Question #4

Do you think that paramedicine *should be* (or should become) a profession?	
Participant ID	**Response**
24	Should be, it is comparable to nursing, and nursing is readily recognized as a profession.
29	The paramedic level needs to be a profession.
37	Should we be, yes. Can we be, I don't know.
40	Yes, represents a huge number of people, and a huge number of patients.
44	Yes, accountability needs to be enhanced.
46	There is a role for a pre-hospital professional; not sure if that should be the paramedic, or if we should create another level.
52	Yes, the complexity and public expectations.
55	Yes.
58	Yes.
65	Yes.
72	Yes.
81	I think it can become a profession.
83	Yes.
87	Yes.

Answering anything other than yes on interview question #3 and "yes" to interview question #4 suggests a gap between what is and what should be. Of the eleven informants that answered something other than "yes" to whether paramedicine is a profession, nine (82%) answered that paramedicine should be a profession; the other two answers were not clear (see Table 9).

Table 9. The Gap Between What Is and What Should Be in Terms of Paramedic Professionalization.

		Is paramedicine a profession?		
		Yes (3)	No (6)	Qualified or tentative yes (5)
Should paramedicine be a profession?	Yes (12)	24, 44, 83	40, 55, 65, 72, 87	29, 37, 52, 58
	No (0)			
	Not clear (2)		46	81

At least two of the responses indicated some skepticism as to whether paramedicine would become a profession. One example of this doubt is reflected in the following comment:

- "I started out being really committed to it [professionalism] … I thought we should work hard at trying to get there and affiliated with like minded people. We talked about the same kinds of things and are trying to build a career that goes in that way. I hope I am not becoming cynical but I am starting to wonder if we have reached terminal velocity in trying to become a profession. Do we need to build more sophisticated people to drive the profession or is this as much as we are going to get?" (37)

5.3.3. What Will be the Effect of the Professionalization of Paramedicine?

Thirteen of the informants were asked if the overall effect of the professionalization of paramedicine would be a positive thing. All of the responses indicated that professionalization would have a net positive effect.

Table 10. Interview Question #5

Do you think that the professionalization of paramedicine is a positive or negative thing?	
Participant ID	**Response**
24	Positive
29	Positive
37	Positive
40	Positive
44	Positive-it has elevated the expectations for education and practice
46	Positive
52	Positive
55	Positive
58	Positive-all of the attributes of a profession ultimately are in the interest of the public.
65	Positive
72	*Question not asked of this informant*
81	Positive
83	Positive
87	Positive

Typical responses were:

- "You have to go back and look at what we do. You know, we can't afford to be screwing up in the field. Yeah, I could be a real estate professional and I could sell you a house with a leaky roof so you are going to get wet. But I go out and screw up as a paramedic and kill you or cause you some major problems the rest of your life, that is a lot different. So, I see the necessity to professionalize. It is more critical in our field." (81)

- "In many ways we have let the genie out of the bottle, and it will go that way. It may go slower than what others want; it may not be the quite the exact model that the educators want; it won't be the same models that managers will want; it won't be the same model that maybe the rank and file or maybe the incoming people want, but it is going to head that way. It has to. There are too many communities of interest that expect it." (55)

- "The risk to human life based on the things that the profession does, or does not do, add weight to its importance. It is truly a matter of life or death as well as advanced knowledge and their high level skills that are needed." (83)

5.3.3.1. The Effect of Professionalization of Paramedicine on Paramedics

Thirteen informants were asked about the effect of professionalization of paramedicine on paramedics. Their answers are summarized in Table 11.

Table 11. Interview Question #6a

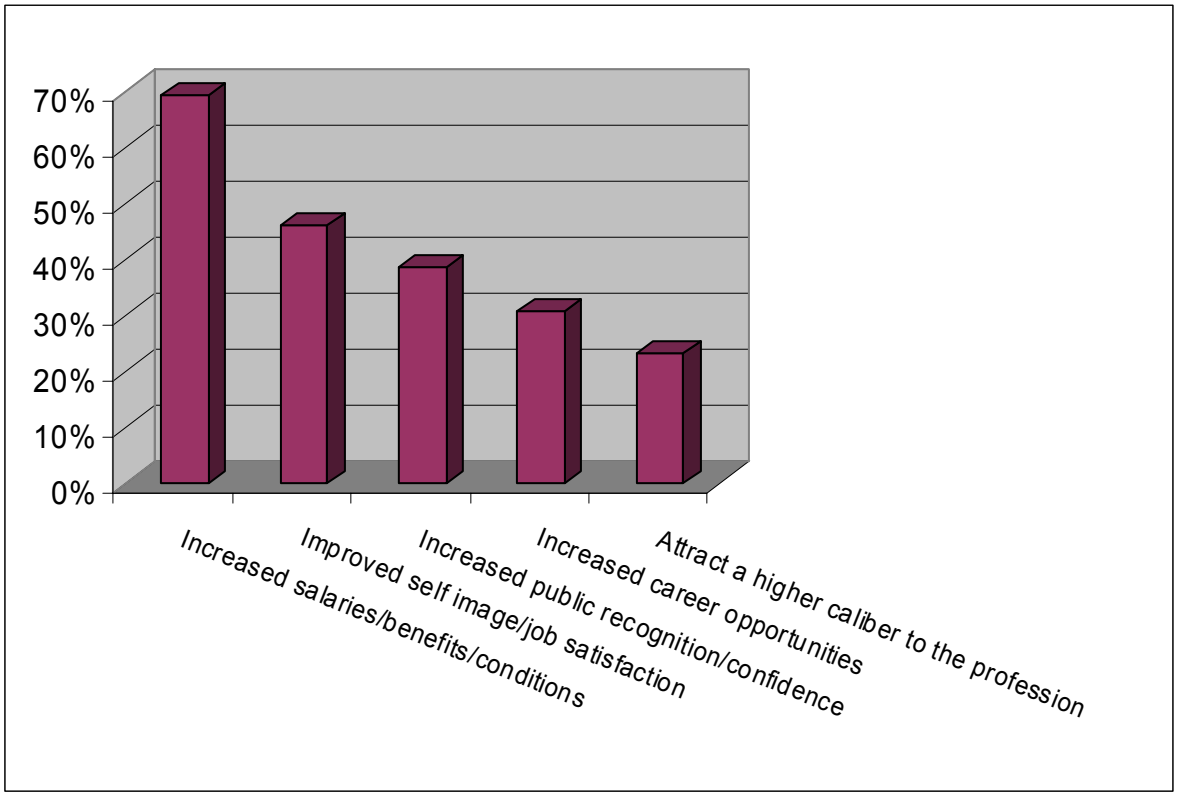
What do you think will be the effect of a professionalization of paramedicine on paramedics?		
Participant ID	**Positive**	**Negative**
24	It will increase paramedic salaries.	Viewed as a negative thing, paramedics have a limited view of patient care and are not interested in a holistic approach.
29	Greater knowledge allows greater anticipation of patient needs. Potential for expanded roles.	
37	*Question not asked of this informant*	
40	Increased reimbursement	
44	Job flexibility/reciprocity, increased professional recognition, improved self image,	Increased accountability and liability
46	Increased pay	Resistance from some current paramedics
52	Increased self esteem, increased	

	public understanding of what a paramedic is	
55	Attract a higher caliber individual	
58	It will elevate the effort necessary to become a paramedic. Increased commitment necessary to complete training and credentialing process. Increased salaries. Increased public perception	
65	Increase pay, benefits, working conditions.	
72	Determine our own destiny, increased income, benefits, better working environments, increased satisfaction, improved retention, held responsible for your actions	
81	Increased self esteem, motivation, improved salary/benefits, improved interactions with other medical professions, increased public confidence, and increased opportunities.	
83	Increased income and ability to attach better quality individuals to the profession, higher esteem, higher self actualization,	
87	Better pay, recognition, career advancement, resistance to more training, recruit a better class of individuals	

Five themes were identified by multiple informants (see Table 5): Nine (69%) stated that professionalization would have a positive effect on salaries, benefits, and/or working conditions. Six (46%) stated that professionalization of the discipline would improve the self-image of paramedics, lead to greater job/career satisfaction, and/or increase the opportunities for self-actualization of paramedics. Five (38%) stated that professionalization would increase the recognition and confidence that the public has about EMS. Four (31%) stated that professionalization would increase the opportunities for advancement and expanded roles as well

as lead to greater job flexibility. Three (23%) stated that increased professionalization would attract a higher caliber of individual to a career in paramedicine. See Figure 5.

Figure 5. Percent of Informants Who Identified Major Themes Regarding the Effect of Professionalization of Paramedicine on Paramedics



Some examples of the comments are:

- "I think one of the big things that you are going to see is an increase in income, an increase in benefits… better working environments, people that are happier with their positions and, I hope we will see [increased] retention of EMS providers." (72)

- "I think the positive effects would be, hopefully, higher pay. I know that is the one thing that everybody wants to associate with professionalism is a demand for higher pay, but as people invest more in their education they expect to get more out of it." (46)

- "There will be an effect on the individual and hopefully that person will have more self esteem, more motivation." (81)

- "… as paramedics we enjoy a favorable opinion of the public. But I think that too would also increase. That we would probably be elevated in stature just a little bit

and probably be on more of a par level with nursing and with respiratory therapy. Right now, I think EMS itself is about a notch below both of those professions." (58)

- "I think a lot of times paramedics…feel like a second class citizens…I think it can improve the self worth overall as a group." (52)
- "A broader knowledge base that would allow more anticipatory care plus the potential for expanded roles." (29)
- "I am hoping we can [recruit] a better class of individuals" (87)

Other comments regarding the positive effects of professionalization made only by one informant were: improved patient care, increased self determination, improved retention, increased motivation, and improved relationships with other health care professionals. There were only two negative effects of professionalization of paramedicine that were identified by more than one informant: resistance by current paramedics and increased accountability.

5.3.3.2. The Effect of Professionalization of Paramedicine on EMS

Nine informants were asked about the effect of the professionalization of paramedicine on EMS. No clear trends, either positive or negative, emerged among the responses. Two informants commented that professionalization of paramedicine would increase the respect and professionalism of EMS overall. Other informants identified improved integration into the health care system; the possibility of expanded roles for EMS; increased attention to EMS issues; nationwide standardization; improved career ladder; and attracting a higher caliber individual to EMS. Two informants stated that increased professionalization may decrease the number of volunteers and one comment each were received that it may cause turf battles with other

professions; decrease medical director involvement; increase costs; and decrease the size of the employment pool. The answers are summarized in Table 12.

Table 12. Interview Question #6b

What do you think will be the effect of a professionalization of paramedicine on EMS in general?		
Participant ID	**Positive**	**Negative**
24	*Question not asked of this informant*	
29	EMS will be recognized as a profession and integrated into health care and public health. Expanded roles of EMS.	'Turf battles' with other health professions, especially nursing.
37	More attention to EMS issues; more respect in the eyes of other health professions.	
40	Possibility of splitting EMS into a technical and professional level/hierarchy.	
44	Standardization of competencies nationwide.	Less physician involvement
46	More of a career ladder, may attract more and a higher caliber of people.	May discourage volunteers
52	Paramedics would become the clinical leaders of EMS.	
55	A rising tide will lift all ships	
58	A trickle down effect.	May have a negative effect on volunteer EMS.
65	*Question not asked of this informant*	
72	*Question not asked of this informant*	
81		May increase costs and decrease personnel
83	*Question not asked of this informant*	
87	*Question not asked of this informant*	

Some representative comments:

- "I think there would probably be a little bit of a trickle down effect…once we elevate the stature and the prestige and the academic preparation for paramedics, I think that is going to flow downwards and probably start hitting Intermediates and EMTs. I also think that it may have a profound impact on volunteer EMS." (58)

- "Everybody is afraid of losing turf and somebody doing what they should be doing." (29)

5.3.3.3. The Effect of Professionalization of Paramedicine on Employers

Ten informants were asked to identify the effect of professionalization on the employers of paramedics. Seven (70%) stated that it would increase costs, primarily due to increases in salaries and training costs. Two (20%) mentioned that it may be harder to retain employees if they have increased career options and a decrease in the size of the employee pool. No trends emerged regarding positive effects of professionalization of paramedicine on employers. Each informant's answers are summarized in Table 13.

Table 13. Interview Question #6c

What do you think will be the effect of a professionalization of paramedicine on the employers of paramedics?		
Participant ID	**Positive**	**Negative**
24		Viewed as negative, will have to deal with rising salaries and benefits.
29	Increased cost. Better patient care and employee satisfaction.	
37	*Question not asked of this informant*	
40	*Question not asked of this informant*	
44	Increased training costs.	
46	They would get a better product.	May be harder to retain paramedics if they have more career options.
52		Paramedics will be more sought after and employers will not have the leverage that they used to.
55		Employer's costs will increase.
58		Employers will continue to struggle with workforce shortages and challenge to meet the rising salary expectations of higher trained individuals.
65	Improved retention.	Increased costs (i.e. salaries).
72	*Question not asked of this informant*	

81		Increase in shortage, difficulty in recruiting and filling positions, increased costs (reimbursement, liability, equipment)
83	A good thing for employers too	
87	*Question not asked of this informant*	

5.3.3.4. The Effect of Professionalization of Paramedicine on Patient Care

All of the informants asked (11) stated that professionalization of paramedicine would have a positive effect on patient care. See Table 14.

Table 14. Interview Question #6d

What do you think will be the effect of a professionalization of paramedicine on patient care?	
Participant ID	**Response**
24	Improve dramatically. Some patients get lost when the paperwork increases.
29	Improved patient care.
37	*Question not asked of this informant*
40	Improved.
44	Positive.
46	Positive.
52	Positive.
55	Positive, but we must be careful not to educate ourselves out of a job (like nursing).
58	*Question not asked of this informant*
65	Positive. "Provides them a higher and more consistent standard of care."
72	Positive.
81	Positive. More consistent quality of care and more interest in quality improvement.
83	Positive.
87	*Question not asked of this informant*

Some representative comments were:

- "The patient is the big winner." (29)
- "That can only be positive. I don't see any downside to professionalization when

it comes to patient care." (46)

- "… for our patient's sake, we do need to be professional." (58)
- "… ultimately patients benefit, but [the] EMS professional benefits by having a professional organization to rely on to set standards and to help promote their well being." (83)
- "Establishing paramedicine as a profession serves our patients well. It provides them a higher and more consistent standard of care. I think it provides them with knowledgeable providers who are professional through and through…[they will be] able to respond to new and changing situations with a higher level of proficiency and a depth." (65)
- "I am just not talking about giving the drugs. I am talking about treating the patients like human beings, treating patients with dignity, with respect, and so forth. I can see nothing but positive things with patient care but again it is the whole patient." (72)

5.4. Research Question #3: What is the Role of BDEMS Programs in the Professionalization of Paramedicine?

The third research question is: 'How do the directors of BDEMS programs see the role of BDEMS programs in the professionalization of paramedicine? To what extent, and in what ways, do they believe that BDEMS programs are contributing (or not contributing) to the professionalization of paramedicine? How does this compare to the major themes of professionalization in the contemporary literature?"

Universities have played a central role in the evolution of the professions in American society. Historically, the title *profession* was virtually synonymous with a university education. By the turn of the 20th Century, however, a number of formerly vocational pursuits found themselves in universities, and the lines began to blur. The university movement (of 1900) contained a respect

for the changing world and recognized the need for rigorous professional training in engineering and many other phases of applied science. The impact of Jacksonian ideals regarding work and egalitarianism resulted in universities being "required to welcome and serve potential merchants, journalists, manufacturers, chemists, teachers, inventors, artists, musicians, dieticians, pharmacists, scientific farmers, and engineers on an equal basis with students of law, theology, and medicine" (Rudolph, 1962, 1990).

The university's role in a profession is hardly limited to an instructional role. The university is without a doubt the major source of the transformation of the source and creation of formal knowledge in all advanced societies (Shils, 1969), (T. Parsons, 1969). Bell (1976) defined formal knowledge as those subjects of research and teaching in the modern university. Not only is the university responsible for training of those engaged in the knowledge-based pursuits, it is also largely responsible for the creation of formal knowledge. Freidson (1986) stated that "perhaps more important than the substance and role of formal knowledge is the fact that the university itself provides a professional pursuit to most of the intelligentsia and the intellectuals who are concerned with the transcendent and the teleological."

As discussed previously, Freidson (1994) contends that preparing professionals to function effectively in the modern post-industrial economy often involves work of an intrinsically complex character that resists typical notions of rational managerial control. Therefore, professional socialization becomes an important component of the educational process.

> "[H]igher vocational education does not merely insert knowledge into people's heads, but also builds expectations and commitments not easily overcome by managerial or policy

> rationalization. The sociological significance of this effect goes beyond technical competence of economic significance. Long periods of difficult training for complex and abstract skills impart a strong commitment to those who are trained. They develop disciplinary and occupational solidarity and resist the notion of being hired hands to simply perform tasks for management. They bring expertise to the work setting, and expect to be granted a degree of discretion in the manner in which they accomplish their work." (p. 94)

One rubric proposed by Freidson (2001) involves an analysis of the characteristics of the training of an occupational group. He suggests that professional training has a high proportion of the training occurring in universities; is conducted by teachers who are members of the profession; has faculty who are dedicated full-time to teaching and research; and has a university affiliation. The ideal faculty is composed of members of the profession who dedicate themselves full time to teaching and scholarship. These faculty are also engaged in research intended to codify and refine what is already known, and to innovate and experiment in an effort to develop new knowledge and extend the old.

The university is ideally suited for instruction of the type needed to develop professional competence. Theory and principles are formally taught first, serving as the foundation of the discipline. Theory and abstract concepts are emphasized, justified by the assertion that the work requires the exercise of considerable discretionary judgment rather than the choice and routine application of a limited number of mechanical techniques (Freidson, 2001).

Stinchcombe (1990) describes the education of professionals in a university setting as "institutionalized reason" in which "people are trained as practitioners in an area in schools in which both the role of the teacher and the role of the student are differentiated from the roles in the practical work of the institution; in the highest development the role of teacher itself carries an obligation to contribute to the rationalization of the body of culture by writing textbooks or technical monographs, and students learn the paradigms separately from practice rather than only by doing progressively more complex jobs."

Clearly, the role of the university is vital to the professionalization of an occupational group. Occupations wishing to move more toward the ideal-type must develop relationships with universities to develop and support a critical mass of knowledge elite who assume the responsibility to select, train, and socialize new members of the profession as well as generate the specialized knowledge of the discipline. Some of the general comments regarding the role of BDEMS programs are reflected in the following quotations:

- "As a faculty member at a health science center, I have to teach. I should say I am expected to teach, I am expected to serve the community in some way, I am expected to be productive in scholarship. So, all of those things are what help produce the professional. So what better place than the university for the increasing professionalization." (55)

- "I see the university's playing a major role purely by the nature of the higher education institution. You look at higher education and you even look at the people that work within higher education basically there [are] usually three major focuses. One is teaching, obviously but the second is scholarly activity, and the third is service." (72)

- "The role of the university really truly is to establish a leadership forum and credibility of the EMS as a professional.… If you are not at the table, you'll never be a recognized profession." (83)

One interview question ("How do you see the role of BDEMS programs in the professionalization of paramedicine?") related to the question about the role of BDEMS programs in the professionalization of paramedicine. All fourteen study informants responded to the question. Most answers were lengthy and involved follow-up questions and in depth conversations and discussions about various roles that BDEMS programs. Responses to this interview question are summarized in Table 15.

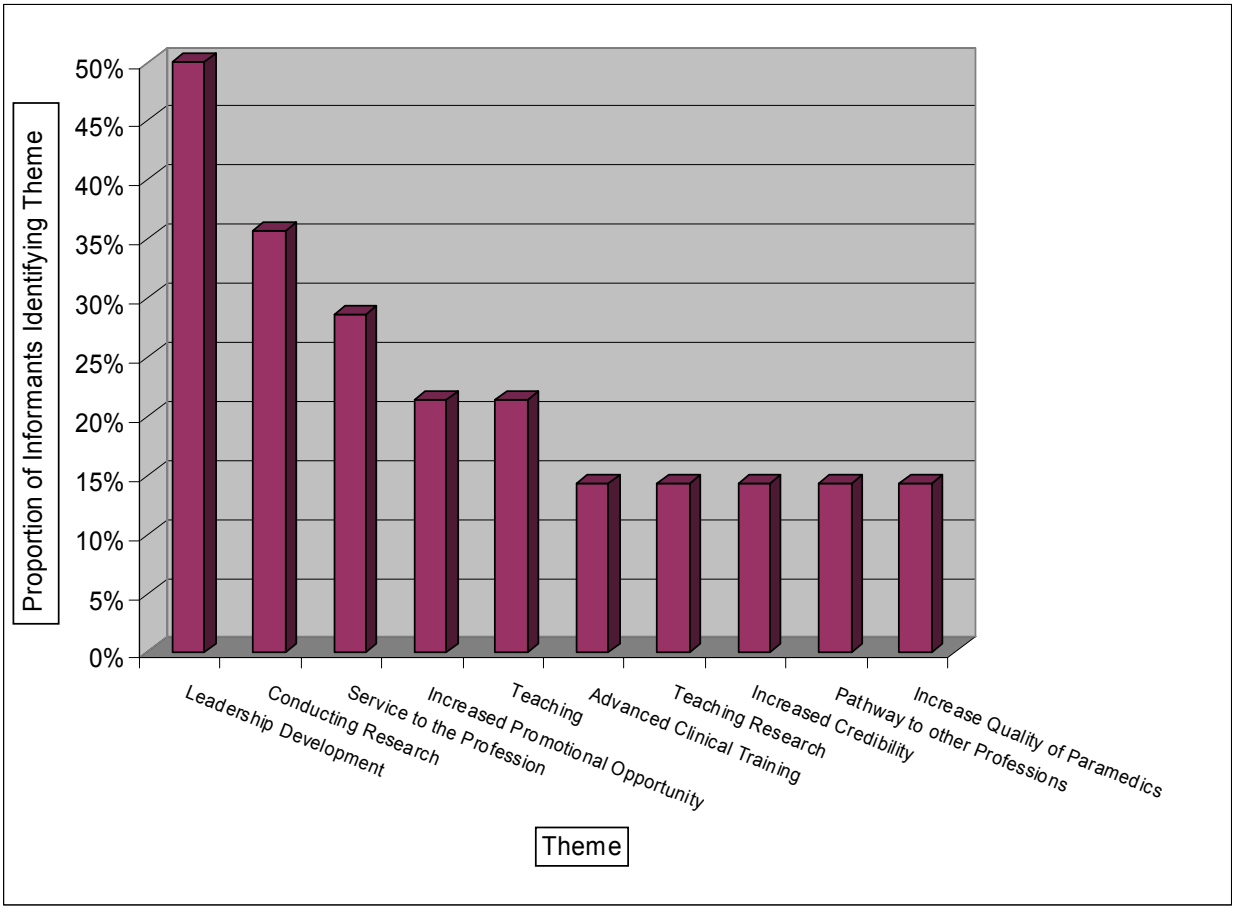
Table 15. Interview Question #7

How do you see the role of BDEMS programs in the professionalization of paramedicine?	
Participant ID	**Response**
24	Graduates have a larger impact at the local level and increased promotional opportunities. Leadership development. Advanced clinical opportunities and career mobility for graduates. (Following prompt) Assist with research, serve on state EMS boards, etc.
29	Provide education comparable to the other professions. Teach students how to learn.
37	Develop system leaders and managers, generally NOT to create more sophisticated clinicians.
40	Provide an opportunity for those who want career promotion within and out of EMS; leadership development.
44	Crucial to the professionalization of paramedicine; developing a more advanced clinician; giving individuals far greater career and promotion opportunities; create a core group of individuals prepared to do research.
46	Prepare people for leadership and management positions. Simply having a bachelor's degree option is important for professionalization. Program conducting research.
52	As in nursing, education will play a major role in professionalization. Our graduates make more money and have better self esteem. Graduates become mid and upper management, educators, and researchers. Stepping stone to other profession, and they have a better understanding of what we do. Leadership development.
55	Play a gatekeeper role, teach, scholarly productivity, service to the community.
58	Leadership development; provide a strong voice for the regulatory process; setting the agenda for the profession; credentialing process; having a strong research role.
65	Improves the profession overall by selecting better and better qualified individuals to do the work. Teach people how to think and how to be a lifelong learner; creating an ethical and moral foundation for decision making.
72	Teaching, scholarly activity, service.
81	Provide advanced education in administration, research, and quality improvement

83	Adds a certain degree of professional legitimacy.
87	Lead a transition to associate's degree to bachelor's degree minimum for paramedics, encourage multidisciplinary study.

Despite the fact that most informants identified multiple roles for BDEMS programs, no single role received comment by more than half of the informants. These themes are graphically presented in Figure 6.

Figure 6. Major Themes Regarding the Effect of Professionalization of Paramedicine on Paramedics



5.4.1. Leadership Development

Leadership Development was cited by seven (50%) of the informants and was the role most frequently identified. Typical responses regarding leadership development were:

- "Our mission really shouldn't be focused on purely cranking out paramedics. What we should be doing is educating the future leaders for the profession. Sure everyone is going to get all the trauma classes and the cardiac classes, and so forth. What we really want the focus on is providing a set of tools for our students so that within a few years after graduation they can assume some type of a leadership position within our profession. Whether that is as EMS director or researcher, or working for the state office of EMS or teaching EMS or whatever. So I really think that is where the baccalaureate programs, that is the niche that I think they should be focusing on"(58)

- "Hopefully our bachelor's degree program, and others, are starting to develop those who become the educators, the leaders, the policy makers the managers all of the people, but I think we also need to be developing patient care providers." (65)

5.4.2. Generating Research and Scholarship

Freidson (1986) illustrated the critical role that university faculty play in the creation of formal knowledge. In contrast to teachers in other settings, university faculty are provided with time to perform scientific, scholarly, and intellectual research and writing that in and of themselves do not have sufficient market value to support salaries in an entrepreneurial or free market setting. Therefore, universities play a key strategic role in the creation and transmission of formal knowledge. In this respect, universities are quite unique organizations. Modern professions control innovation within the discipline by having a special class of members serving as university faculty. These individuals represent the knowledge elite of the profession; they teach

the next generation of professionals the latest knowledge and expand the conceptual basis of the profession (Freidson, 1994).

Five (36%) of the informants stated that one of the roles of the BDEMS programs is to conduct research, presumably by program faculty members. The dearth of the evidence base of prehospital emergency care is a major topic of discussion and publication in the profession (Callaham, 1997), (O'Connor *et al.*, 1999), (Brice *et al.*, 2000) and the subject of a series of NHTSA published reports. The *EMS Research Agenda for the Future* (National Highway Traffic Safety Administration, 2000b) clearly discusses the role of universities in building the research basis for EMS.

A typical comment regarding the role of BDEMS programs in scholarly activities was:

- "The role of the program is very important in conducting research because the [program] is located in an institution of higher education which typically has the resources and the support needed to conduct research, whereas other types of institutions don't typically have that kind of support. I think that is a very important role for the Bachelor's degree and EMS. (46)

5.4.3. Leadership and Service

In many professions, university faculty members serve their professional communities by engaging in service and leadership activities that generally do not generate revenue to the individual or the institution. Four (29%) of the informants identified service to the profession and leadership activities as a role for BDEMS programs. Representative comments included:

- "We have got to continue what we are doing, we can't just go complacent, and we certainly can't go backwards. We have got to go forward…we should be the ones determining our future." (52)

- "Bachelor's degree programs have an opportunity and maybe even an obligation not just to educate the student but also to be involved in the community and to be educating the community. That interface between academia and the community is important beyond just what we do for students." (65)

5.4.4. Other Roles

Three informants (21%) stated that one of the roles of BDEMS programs is to provide an educational track for those individuals interested in moving into managerial, educational, and administrative positions. Examples of comments of this theme were:

- "For those individuals who desire to climb the hierarchy ladder of the system it has always been widely recognized that degrees and additional education is the way to do that. Within the EMS domain there is a benefit to having a student who has a baccalaureate level degree." (40)

- "Well in terms of the individual I think that it makes the person more marketable in the long term, in the employment world. Again, because of the opportunities to seek other positions within their organization" (44)

Of note, all three of the individuals who cited increased promotional opportunities also mentioned career mobility and the fact that many graduates from BDEMS programs use their degree as a "stepping stone" to other careers, specifically medicine, physician assistant, nursing, physical therapy, occupational therapy, etc. Excerpts from the transcript include:

- "We are all part of the health care domain and our degree represents something that allows them to function not only in the EMS domain but allows it to be used as a stepping stone to PA, medical school, nursing or any other number of health related professions be it PT/OT" (40)

- "because of the opportunities to seek other positions within their organization or and then the other thing that we see in our graduates are that if people are actually trying to transition into another career, whether it is a PA, nursing school, medical school, dentistry," (44)

In addition, two other informants specifically identified a role of the BDEMS programs as providing a mechanism to transition graduates to other careers. This is a one of the more controversial issues that arose during the interviews, and will be discussed in greater detail later.

All of the other issues were identified by only one or two informants, and therefore hard to defend as representing a significant trend or theme among numerous program directors. These issues are: advanced clinical training, teaching research, providing an educational experience similar to other allied health care professions/increased credibility with other professions, serve as a 'gatekeeper' for the profession/increase the quality of paramedics, increase self esteem, and provide leadership for the profession.

A difference of opinion emerged in one area. While two informants suggested that one of the roles of a BDEMS program is to provide more advanced clinical training, therefore providing graduates with a foundation for expanded clinical practice, one informant specifically stated that this should *not* be the role of BDEMS programs.

5.4.5. Using the Teaching/Scholarship/Service Paradigm

Viewing the comments in light of the traditional notion that the role of the university consists of a triad of teaching, scholarly activity, and service provides additional insight as to the BDEMS program directors view of the role that they play in the professionalization of paramedicine. Analysis of the responses to the previous questions revealed that all of the informants readily identified the teaching role of their programs. It is not surprising to find frequent references to the responsibility to prepare the next generation of leaders of the profession. Frequent references were made to producing a graduate with higher level decision making skills and with an educational foundation that enables him/her to be successful in a leadership position. Examples of such references include:

- "I feel like those paramedics that are running around with a BS after [their name] have a great advantage…because they have better rounded preparation so that they can more globally look at the situation." (24)

- "They need to see the bigger picture of how their piece fits into healthcare: They need to be able to talk to and teach their patients, and to each other as well." (29)

- "The Bachelor's degree programs really do have the opportunity to prepare people; prepare EMS providers' to take on the roles that are necessary for the next level of sophistication in EMS." (37)

- "People learn how to think, how to learn, through education…[We should be] teaching individuals how to become life long learners, how to acquire knowledge, how to relate to a world that is changing, and adapt and learn and integrate new information and knowledge without bias, with less bigotry for ideas, for people and for things and really focus on input and output and the process in between. So part of that is critical thinking but part of that recognize[ing] different ideas and be[ing] able to appreciate new approaches to things." (65)

More surprisingly is the relative absence of reference to the other two legs of the academic stool. Only five (36%) informants identified the responsibility of the program to produce scholarly

work. While a number of informants commented about the need to *teach* research relatively few discussed the role of the program faculty in *conducting* research. One informant specifically addressed a possible explanation for the relative lack of attention to scholarly activity:

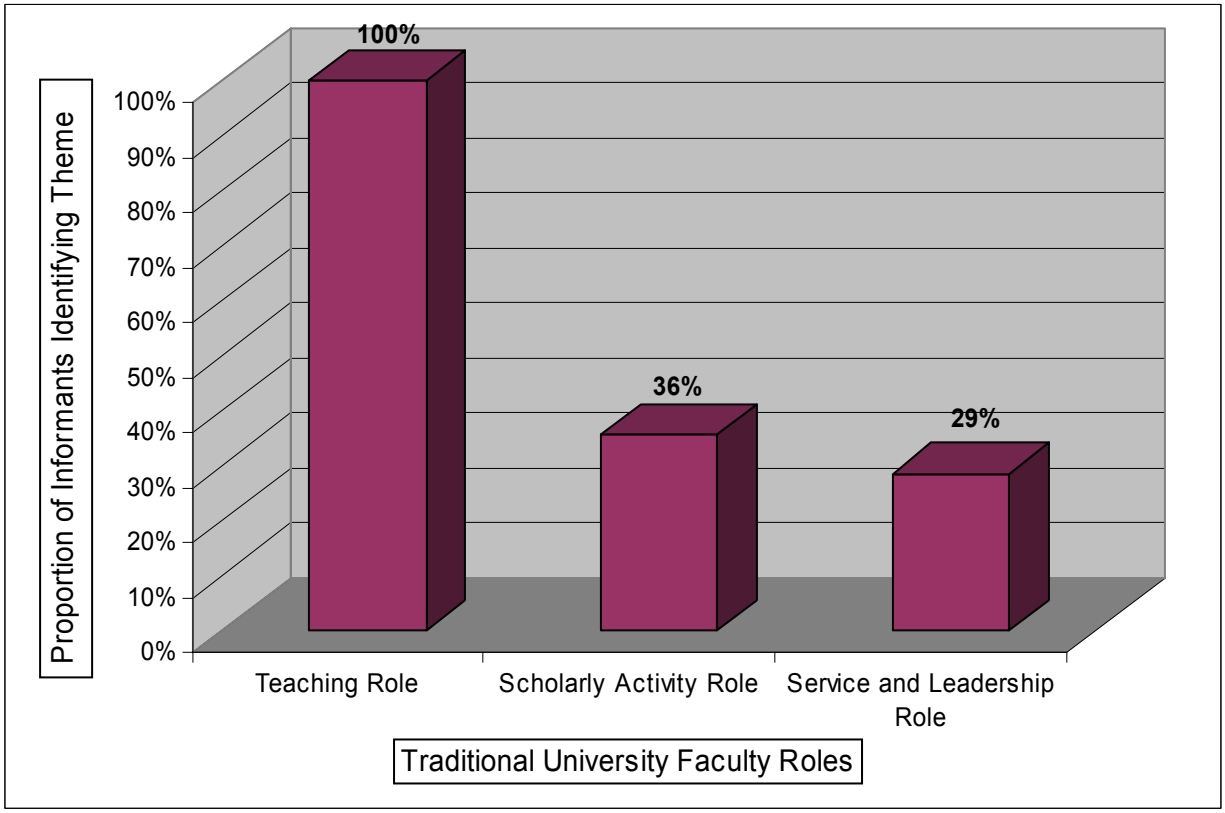
> "I think one of the challenges is because of the demands on staffing and teaching EMS programs. Faculty in a lot of EMS programs are not afforded the same sort of academic research opportunities as faculty in other areas… I am not sure we are established enough and our programs tend…to run pretty lean and hard just to make the bottom line when it comes to keeping our students, keeping them, teaching them, and making classes keeping the curriculum put together, let alone conduct substantial and quality research on top of that." (65)

Also surprising was the relative lack of comment on the role that BDEMS programs play in leadership and service in the professional community. Again, frequent references were made regarding *teaching* leadership and service, but only four (29%) cited *performing* service or leadership as a role of the program and program faculty.

Interestingly, the lack of reference to the research and service/leadership role appears to be independent of the highest educational level achieved. Only one (20%) of the five informants that identified research as a role of the program had completed a doctoral degree; of the three doctorally-prepared informants, only one cited the research role. However, two of the three (66%) informants who had earned the academic rank of Professor identified both research and service/leadership as roles of the programs, suggesting either that the process of academic promotion either instills a commitment to research and service, or rewards such behavior with promotion. However, the small numbers make it difficult to draw any significant conclusions in this area.

See Figure 7 for a graph representing the percentage of informants who cited the three traditional roles of university faculty as part of the role that BDEMS programs play in the professionalization of paramedicine.

Figure 7. Three Traditional Roles of University Faculty as Part of the Role that BDEMS Programs Play in the Professionalization of Paramedicine.



5.5. Research Question #4: What Prevents BDEMS Program from Contributing to the Professionalization of Paramedicine?

The fourth research question is: 'What do the directors of BDEMS programs see as the barriers and constraints for BDEMS programs to contribute to the professionalization of EMS, now and in the future?'

Two interview questions ("What are the barriers and constraints for BDEMS programs ability to contribute to the professionalization of paramedicine?" and "Why do you think that there are not more BDEMS programs?") related to this question. Responses to these two questions are summarized in Table 16 and Table 17.

Table 16. Interview Question 8

What are the barriers and constraints for BDEMS programs ability to contribute to the professionalization of paramedicine?	
Participant ID	**Response**
24	Struggle for credibility within the academy; high maintenance; low enrollment; finances are based primarily on grant support.
29	Expensive programs to run, small enrollment; reliance on external funding which is limited in this discipline; student pre-college preparation; cost of tuition/lack of financial aid.
37	The general lack of understanding of the value of an undergraduate education; cost and access.
40	Inconsistent nomenclature; lack of curriculum standards; no accreditation process; different entry/exit process.
44	Being one of the only health professions on campus and having no medical school; the program is resource intensive; cost and financial aid; little value placed on education by employers of paramedics.
46	Cost, especially relative to the pay; time that it takes to complete.
52	Have not defined all the benefits, some employers are threatened by formal education, especially if they have none. Some managers find it harder to control educated employees. Little commonality between the BDEMS programs.
55	Prospective students don't see the value of the degree, especially in terms of what graduates can do with a bachelor's degree in EMS that they cannot do as a paramedic. No clear salary benefit. The profession has not convinced itself of the value of a degree.
58	Recruitment barrier due to the fact that there is no added value to holding a college degree; funding challenges created limited state budgets and small programs; right now it is not all that attractive to be a paramedic; limited opportunities for career advancement.
65	Difficult to get adequate enrollment; perception of the value (or lack thereof) of a bachelor's degree; cost (especially in terms of a cost:benefit ratio); no guiding vision behind the role of the BDEMS programs.
72	Lack of enrollment.

81	No employment benefit to having a BD; never really embraced the allied health role and are not integrated into allied health education; low enrollment; availability of faculty; cost of enrollment; high numbers of graduates going to other professions.
83	Cultural barrier that many in the occupation feel they got along fine without degrees; hierarchy of established professions and we are the new kid on the block.
87	No employers insisting on having a BD; paramedics just don't come.

Table 17. Interview Question #9

Why do you think that there are not more BDEMS programs?	
Participant ID	**Response**
24	Mindset in the EMS community that you do not need a college degree. Large percentage of the potential student population is not prepared for college level work.
29	Paramedicine is still not considered an academic discipline. Low demand.
37	Small demand in the EMS community. Little support, guidance, or curriculum standards for programs starting up. Access for working paramedics.
40	Programs that have only the bachelor's degree are struggling.
44	EMS education began as a technical/vocational program and tended to stay there despite the changes to the profession.
46	Hard to find qualified faculty; start up costs; low enrollment.
52	Not one particular reason…current programs represent the progressive leaders. Programs are fragmented and isolated from each other.
55	Finances, the profession has not really made the commitment to bachelor's degree programs.
58	We have not done a very good job of promoting ourselves.
65	Finding qualified faculty, the ambiguity of the curriculum (what are we aiming for?); cost:risk to the institution; is there a demand for our graduates?
72	*Question not asked of this informant.*
81	*Question not asked of this informant.*
83	We are ahead of the curve.
87	There are not any takers; it is harder to recruit people into caregiving roles.

Analysis of the responses to interview questions 8 and 9 suggest four main themes that affect the success of BDEMS programs. The two most frequently cited issues are: a lack of clear value of having a bachelor's degree (cited by twelve (86%) informants) and the current programs have low enrollment (cited by ten (71%) informants). Two other themes, identified by fewer

informants (six (43%) and four (29%) respectively), but still appearing to represent some trends were: the high cost/resource intensity of BDEMS programs and the lack of curricular standards.

5.5.1.1. So, the student asked, "What's in it for me?"

The lack of a clear value of the bachelor's degree emerged as a clear theme in the interviews. Subtext included comments on the resistance to education within the EMS community and the lack of salary incentive. Comments representative of the resistance to education in the EMS community are:

- "There is such resistance to education. There is resistance to and harassment… of those that have spent the time and money to go for a degree-based program versus a technical program. You have people in some places who get ridiculed or put down for [pursing higher education]. 'I did it in x amount of time and you had to spend all this time and money and you are in the same spot', so within the field itself we don't support or value education at the grassroots level." (29)

- "There is a relatively small group of people who favor bachelor's degree programs and professionalization but there is a larger set of paramedics and organizations who either don't support it or are really against it. There is an internal struggle within paramedicine itself." (46)

- "…education frightens people." (52)

- "The bellyache that degree programs in EMS face right now is the hostility toward their few members.… The established culture [has a mentality that] we got along fine 'without no stinking degrees' for many years. We are imposing a threat that is going to increase the cost to their poor communities and all the rest of it and being unnecessary because you don't really need a degree to provide that clinical care." (83)

The issue of value of the degree to graduates was also a prevailing theme. Examples of comments were:

- "The resistance is not always because of not wanting education but I think the resistance is more of, what am I going to learn that is going to be of value to me?" (29)

- "There is no recognition [of BDEMS] by the employers for entry level paramedic positions. [They are not] making any differentiation between someone who has gotten a bachelor's degree versus someone who has done a one year program." (44)

- "There needs to be some recognition and some 'added value' to holding a college degree." (58)

- "There are very limited opportunities for upward mobility, so, even though we are focusing on preparing future leaders of EMS, a lot of them are going to have to wait until someone dies or retires before they have an opportunity to rise to that level of profession." (58)

- "What difference does [having a bachelor's degree] make in terms of practice, in terms of pay, in terms of professional opportunities? Right now it is difficult to articulate exactly what that gets a graduate; that in turn becomes a barrier to obtaining solid enrollment in bachelor's degree programs." (65)

- "There is a question of incentive. Such as why should I spend four years waiting to get a job when I can get a job in a year and make the same amount of money? Until we get some pay differential for the different levels that is going to be an incentive problem." (81)

5.5.1.2. Small Programs

The second related major barrier (identified by 10 (71%) informants) to the success of BDEMS programs is low enrollment. Examples of comments regarding low enrollment were:

- "Lack of enrollment…is interpreted as lack of interest.... The biggest problem financially is that resources aren't being sent to low enrollment programs" (72)

- "…when we started this 10 years ago in [state], a survey was sent to all of the paramedics [asking if they would come]…. I remember thinking at the time 'all of these yes's!'…. We had a group come through right way, a wonderful beginning cohort of about 15 folks that started with us…2 of which finished…we

have only graduated 2. We currently have 70 admitted, and 17 active. That is it. So, how bleak do you need it?" (87)

5.5.1.3. Resource Intensity

Six (43%) informants cited the cost and resource intensity of BDEMS programs, especially in regard to the clinical portion of the training. This can be particularly challenging for institutions that do not have other clinical training programs. Below are two representative examples of comments on this issue:

- "There are some start-up costs that the institutions have to absorb before the program can become self sustaining. That itself is always a question because of the enrollment." (46)

- "Our program is not affiliated with a medical school. We are a rarity in terms of being a health career on this campus. So, there is not a network of resources available to us that may be usually associated with an EMS program that is associated with a medical school for instance." (44)

Clearly, the combination of high cost/resource intensity program generating little revenue due to low enrollment and limited grant opportunities is a challenging situation for any program in the university.

5.5.1.4. Lack of Curricular Standards/Consistency

The 14 existing BDEMS programs have little curricula consistency. The evolution of the curricula of the programs was overviewed by one of the informants:

- "Baccalaureate education [in EMS] has evolved: we have two different types…There is a baccalaureate clinical program and the baccalaureate

management program. You look at the clinical program and just cut out the clinical part you probably wouldn't find much difference from a community college [program]. We may have some time to teach some advanced skills when you can go in to depth and you probably have an individual who has had a full year of A & P and a full year of Bio and a full year of chemistry so they have the basic sciences behind them that you are not going to have in a community college…but as far as what is taught, the skill set probably isn't any different. A management track is strictly management and not clinical. Then you have the programs, like many of those who have baccalaureate EMS programs, that really take someone who already is a community college paramedic and now they are going to get a bachelor's degree so they take a generic health management type program or business curriculum and learn that new skill. So, I think what you see the programs doing is the courses and experiences above and beyond the basic clinical that really allow the Baccalaureate programs to prepare the people for the leadership positions that will then move hopefully toward professionalism." (81)

Despite the reference to two basic types of BDEMS programs, there exist no curricula guidelines and there is considerable variation in the curriculum, coursework, and competencies of graduates. The lack of curricula standards was identified as a barrier by four (29%) informants illustrated by the following comment:

- "15 programs offer baccalaureate degrees in what would be loosely defined as a pre-hospital, out-of-hospital, EHS, ours is emergency medicine-we don't even have the same name! We are already at issue because the group who planned to help improve, increase and move and motivate a profession of degree-oriented EMS discipline is disjointed… For us within what we are trying to do, I am not sure we have of the 15 programs so far, common factors…in order to really have us move the profession the way it needs to go is that some how at some point all these schools need to align themselves in such a way to say that if you went to any of the 15 schools when you finished you have the same body of knowledge and therefore that is the profession and that is the accreditation process." (40)

The lack of consistency in nomenclature and curriculum was identified as a barrier by four (29%) informants. Below are a few representative comments:

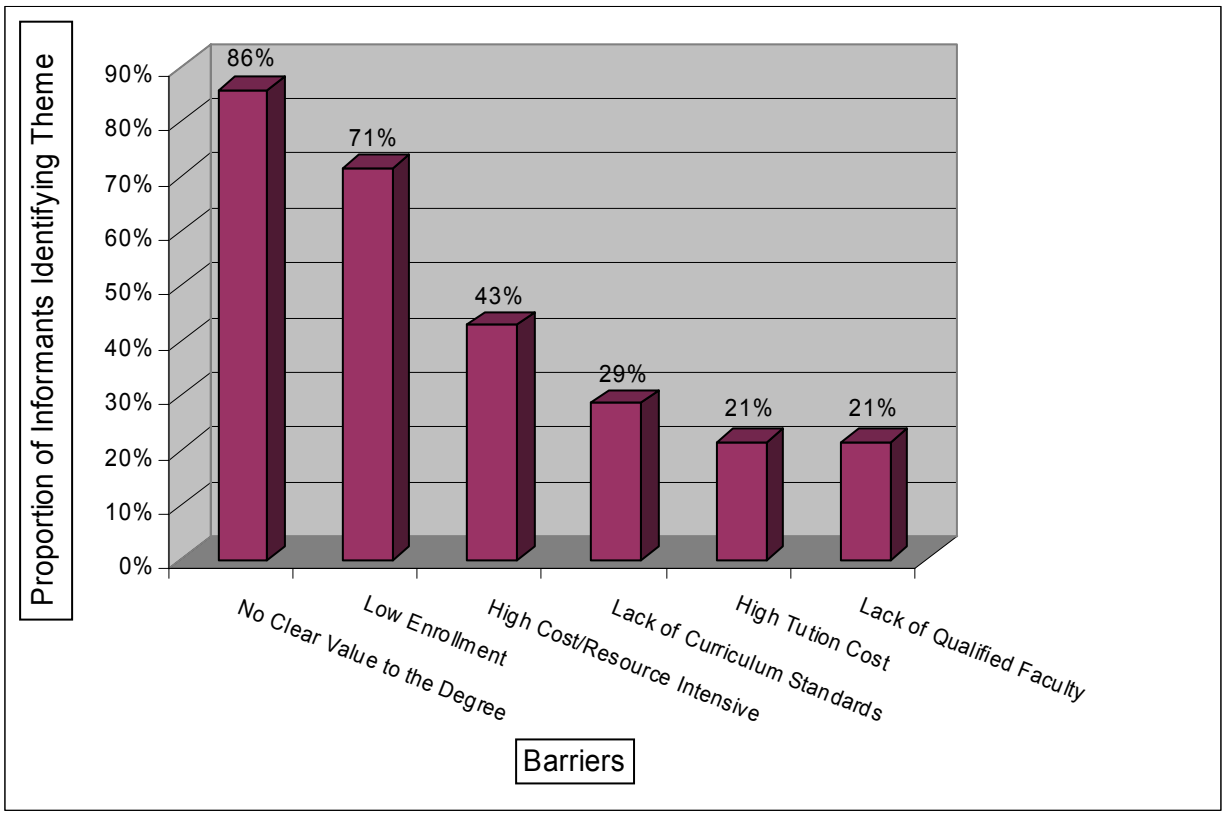
- "There doesn't seem to be a guiding vision behind all of this in terms of how bachelor's degree programs should be developed, what components should be in a bachelor's degree program, how they should be delivered, etc. etc. I think some of that ambiguity hurts us in moving forward into creating a profession." (65)

- "We need to have a little more commonality between what is a bachelor's in EMS. You know, because some people may say I have a Bachelor's in EMS but it is really geared more toward management and then some will say well then you got a management degree in business, others may say oh it is more toward clinical, oh so, that's clinical skills that you may or may not be able to do in that state and certainly can't do in some states. So that, I think is somewhat of a barrier to see that commonality with as opposed to if you know you get a Bachelor's in nursing or a bachelor's of science, that is more established, more defined." (52)

5.5.1.5. Other Factors

Four informants (29%) identified the high tuition costs as a barrier to the growth of BDEMS programs, especially when considering the relatively modest earning potential of field paramedics. This is complicated by the fact that the degree in and of itself offers little immediate financial benefit since licensed paramedics are in high demand in most areas of the country. One informant stated, "They can't spend $120,000 over 4 years and make $35,000 when they get out." (29) Three informants identified the lack of qualified faculty as a barrier in BDEMS programs. These trends are graphically presented in Figure 8.

Figure 8. The Barriers to the Growth of BDEMS Programs



In addition to the trends identified above, two informants identified each of the following issues as constraints to the expansion of BDEMS programs: lack of academic credibility within the institution; dependence on limited external funding; decreasing student financial aid; and the lack of academic preparation of the paramedic workforce.

5.6. Research Question #5: How Have BDEMS Programs Already Contributed to the Professionalization of Paramedicine?

The fifth research question is: 'How do the directors of BDEMS programs feel that their program has contributed to the professionalization of paramedicine? What do the directors of

BDEMS program feel needs to be done to move paramedicine further toward professionalization?'

Two interview questions ("In what ways do you feel that your program contributes to the professionalization of paramedicine?" and "Do you anticipate any changes in your program specifically to address the issues of professionalization of paramedicine?") related to this question. Responses to these two interview questions are summarized in Table 18 and Table 19.

Table 18. Interview Question #10

In what ways do you feel that your program contributes to the professionalization of paramedicine?	
Participant ID	**Response**
24	*Question not asked of this informant*
29	A choice between associate, bachelor's, and masters degrees.
37	Program served as a role model by being one of the first. Our graduates hold influential positions in the profession. International development projects.
40	We have produced a well educated, well rounded, knowledgeable, skilled individual, hopefully with a good attitude.
44	Graduates have very high placement rates, they stay in EMS, and often become supervisors or FTOs.
46	We have trained most of the instructors in the state.
52	Developing leaders, elevating the caliber of the profession.
55	Broaden the horizons of our students, they see the world with a different pair of glasses. Our graduates come out with a different level of thinking critically. Just being here increases the professionalization of paramedicine.
58	All of the program graduates for the past five years have moved beyond field paramedic positions.
65	We develop a thinking, clinically oriented graduate.
72	Provide a mechanism for people to earn a bachelor's degree.
81	Just being there.
83	Graduates have gone on to medical school, graduate school, and jobs with premiere systems.
87	*Question not asked of this informant.*

5.6.1.1. Developing Leaders

Twelve informants were asked how they feel that their program has contributed to the professionalization of paramedicine. Only one issue, leadership development, was identified by the majority (58%) of informants. Some examples of comments reflecting this issue were:

- "A lot of our graduates are active field medics for long periods of time, but also are field training officers, MSA's, and are in supervisory positions so they influence the ongoing training and hiring practices in their agencies." (44)

- "The paramedicine graduates that we see now with their BS are the ones that take the mid-management and upper-management roles. They serve as educators and in some progressive services they get into research. Even from a local community level, they may not ever be published nationally, but they do have a tremendous impact within their state and community." (52)

- "The biggest thing is that we are where a lot of instructors in the state come from. They come out of our program." (46)

- "Within about 5 years of graduation most of our graduates have moved beyond field paramedic positions, and they have always been some type of a leadership role." (58)

In addition to the leadership development role, a number of other responses suggested some trends. Four (33%) of the informants suggested that one of the ways that they have contributed to the professionalization of paramedicine is in providing the community with an educational option for those interested in promotional opportunities. This issue is reflected in the following representative comments:

- "We have created the opportunity and visibility…by having a multi-tiered program, so you can do associate's, bachelor's, [or] master's [degree], so people can see that there is growth potential." (29)

- "It [provides] a mid-career option for people who can come in and complete a Bachelor's degree after they have been clinicians to help them with promotions." (46)

- "A lot of our potential leaders who are going to come in here and really get our profession together are the ones who are graduating; they are the people who are going to step up." (52)

Three informants (25%) indicated that one of the ways that they have facilitated the professionalization of paramedicine is by serving as a role model for other BDEMS programs, and the profession as a whole. Some representative comments were:

- "…historically [this school] has been the institution and the program that other have looked at to say somebody else is already doing it, we can do it too; somebody else has graduates; it is a legitimate program; it is a legitimate degree, it is a legitimate line of study." (37)

- "[this program] serves as a role model for other schools; it serves as a role model for providers; and I am hoping it serves as a role model for the profession. So, you know, the ice has been broken and there are some programs there." (55)

- "Well, I think the mere fact that we are a Baccalaureate program contributes. We are putting out Baccalaureate paramedics…the fact that it is a Baccalaureate program at a major university. " (81)

Three of the informants responded that their program contributes the professionalization of paramedicine by producing a graduate with a well-rounded educational experience focused on decision making and critical thinking. One example of this emphasis is illustrated in the following comment: "Our founding medical director was asked 'what does this degree do, what can you do when you get done with this degree?' and his answer was a one word answer was 'think.' You can think, and to him that was enough. I believe that individuals to be professional must be able to think, and think critically. They also have to have a skill set in leadership, in management, in communication; they need to have a body of knowledge and sometimes a very specialized body of knowledge as well." (65)

5.6.1.2. Do BDEMS Programs Contribute to the EMS Brain Drain?

One theme emerged in response to this question that was controversial. Specifically, what is the role of the BDEMS program in providing the education necessary for admission into post Baccalaureate professional schools (medicine, law, physician assistant, dentistry, public health, etc.)? Should large numbers of paramedics seek BDEMS degrees for that purpose, this would likely result in the removal of the graduate from paramedicine. One of the basic questions regarding the role of BDEMS programs is whether they are facilitating an EMS brain drain, in which the best and brightest seek BDEMS degrees as a stepping stone to another profession. Some BDEMS program directors are sensitive to this concern, as expressed in the following quotation: "So many of our graduates have defected to PA programs and medical schools and other health related careers and haven't remained in leadership positions in EMS. That is one of our shortcomings right now; we aren't doing as much as we could to advance the profession because they are leaving the profession after graduation." (65)

Three (21%) informants responded more favorably to the practical reality that some individuals within the paramedic profession aspire to professional school admission, and BDEMS programs should specifically be designed to facilitate that:

- "We also consider those who eventually end up in medical school or PA school or whatever, as having attained some type of leadership position in EMS, even though they aren't continuing to practice in the field as a paramedic. They are still involved in EMS maybe as a medical director…We have several that come through the program with the intention that this is going to be my undergraduate degree and I will use is as a springboard into medical school, or PA school. We're fine with that--we consider that to be a realistic pathway for our students." (58)

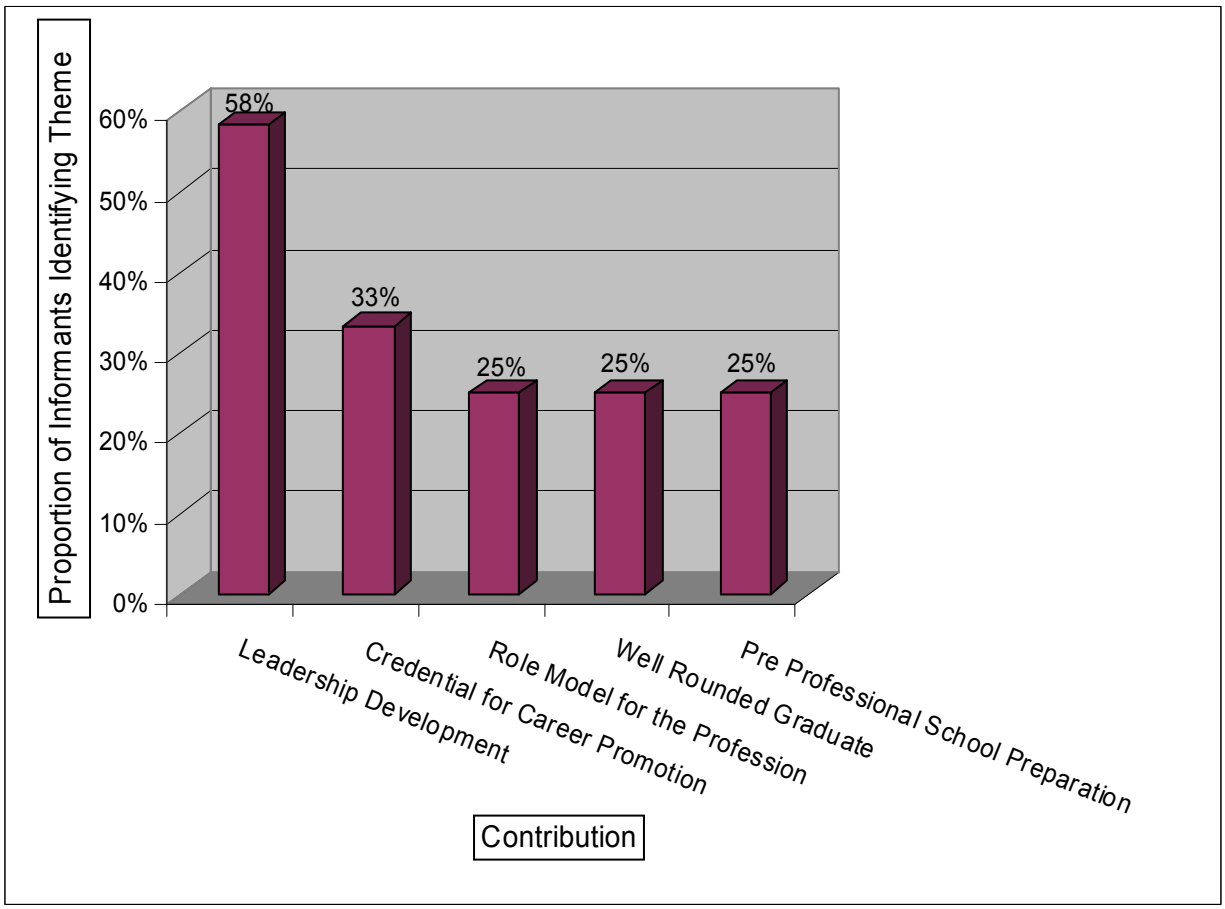
- "[We] are producing a number of degreed graduates who likely are going on to graduate schools and so forth…It doesn't sound like such a positive thing for

> EMS that a person with a Bachelor's degree in EMS gets admitted to a school of medicine. It sounds a bit negative…but our graduates have been very successful and recognized. It is not that we are providing great paramedics. If you just use that as a criterion, then degree programs are doing more harm than good because they are keeping people in colleges when they could be working and in fact they are given the ability to leave the profession rather than being trapped in it." (83)

The role of a bachelor's degree in EMS as a pre-professional school undergraduate curriculum is unclear and the subject of some disagreement among the BDEMS program directors. In an attempt to increase enrollment, some BDEMS programs have marketed their program as a pre-med program, even to individuals who have no interest in a career in EMS. While not specifically addressed in this research, it appears that most program directors are not in favor of such a marketing strategy. Less clear however is the role that a BDEMS program should be playing as an option for admission to professional school for individuals who are already in the profession. This is an area for more in depth analysis.

The trends identified in response to the question regarding the ways that each BDEMS program has contributed to the professionalization of paramedicine are presented in Figure 9.

Figure 9. Contributions to the Profession of Paramedicine by BDEMS Programs

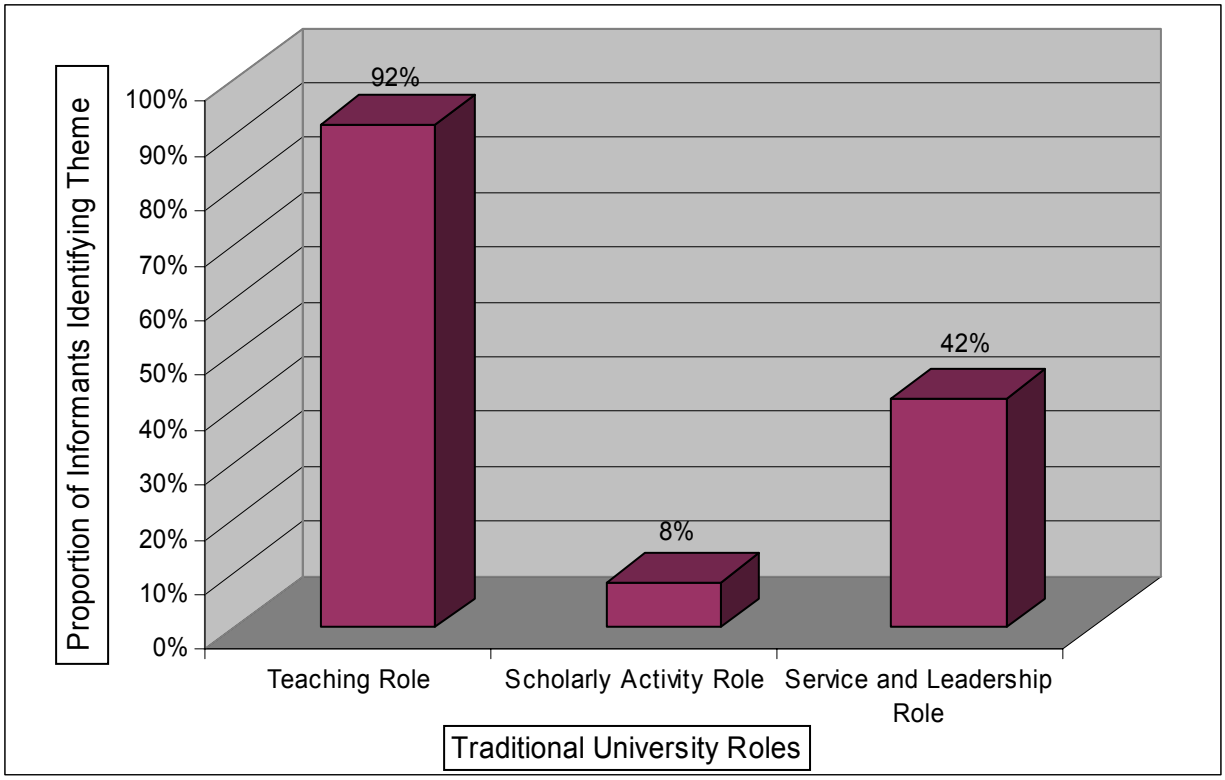


5.6.1.3. Contribution in Terms of the Traditional Roles of the University

Further analysis of the responses to the inquiry regarding the contribution to the professionalization of paramedicine suggests that BDEMS program directors tend to recognize the teaching contribution of the program, while they are less inclined to identify scholarship or service contributions. Of the twelve program directors questioned on the matter, eleven (92%) answers suggested that the BDEMS program has contributed to professionalization by fulfilling a teaching role. Less than half (42%) felt that their program has contributed significantly in the

service to the community role, and only one (7%) stated that his program has contributed significantly in the scholarship role. (See Figure 10).

Figure 10. Contributions of BDEMS Programs to the Profession of Paramedicine in the Three Traditional Roles of the University



Ten (71%) informants were asked if they anticipated any changes to their program specifically to address issues of professionalization of paramedicine. Answers to this question may reveal ways in which the program director feels that his program is falling short of his expectation for contribution. Responses to this are summarized in Table 19.

Table 19. Interview Question #11

Do you anticipate any changes in your program specifically to address the issues of professionalization of paramedicine?	
Participant ID	**Response**
24	Adding a research class and greater emphasis on writing.
29	Making the program more accessible by moving to the College of Professional Studies, decreasing tuition, and offering the program on-line.
37	*Question not asked of this informant.*
40	Not specifically to address issues of professionalization.
44	Adding administration, management, and history of EMS to the curriculum.
46	Not in the near future.
52	Change the degree from interdisciplinary studies with an emphasis in EMS to Emergency Health Services to reflect more integration and public health focus.
55	Adding a course specifically to address issues of the EMS profession and professionalization called Professional Orientation and Legal Foundations.
58	May be adding an educational track.
65	*Question not asked of this informant*
72	*Question not asked of this informant*
81	More management and research, focusing on increasing diversity.
83	*Question not asked of this informant*
87	No. If anything the program will close.

Of the ten informants questioned, no significant trends in the answers emerged. Three indicated that they were planning no changes. Four BDEMS program directors stated that they plan curricular changes: two programs will increase the emphasis on research methods and two programs will increase emphasis on administrative and managerial skills.

One final question, included as an opportunity for informants to add any additional thoughts and comments on the subject was included. This interview question ("Are there any issues about the role of BDEMS programs on the professionalization of paramedicine that I did not ask or that you would like to talk about?"**)** did not relate directly to the primary or any of the research questions, but provided some additional insight. The responses to this question are summarized in Table 20.

Table 20. Interview Question #12

Are there any issues about the role of BDEMS programs on the professionalization of paramedicine that I did not ask or that you would like to talk about?	
Participant ID	**Response**
24	None
29	None
37	None
40	None
44	Challenge of developing preceptors, is the profession really ready for the responsibility and accountability that comes with being a profession?
46	There is a lot of resistance, both internally and externally, to the professionalization of paramedicine.
52	We have to increase the number of people in our profession that have graduate and doctoral degrees
55	We need to begin to talk amongst ourselves and define what a BDEMS is
58	None
65	We need to gain a better awareness of the political process and lobbying, we have to change public perception about EMS and we must become more integrated into the health care system and public health. Continuing education. The value of CAPEMS.
72	More emphasis on research
81	Professionalization is not going to solve all of EMS's problems.
83	None
87	None

6. CONCLUSIONS AND RECOMMENDATIONS

6.1. Conclusions

Research Question #1:

How do the directors of BDEMS programs define a profession?

- Most BDEMS program directors defined a profession in terms of a list of functional characteristics that distinguish groups recognized as professions from those occupational groups not so recognized. No consistent definition of a profession emerged.

What traits/characteristics or types of relationships do they associate with an occupation that is viewed to be a profession?

- The vast majority of the dimensions of a profession emerged at least once during the interviews; however, no clear pattern, trend, or prevailing theme was evident.
- While no clear trend existed, three characteristics: 1) rigorous educational process, 2) legal recognition/credentialing, and 3) self-regulation-were identified more frequently (if only slightly) than the other characteristics.

How does this compare to the major themes of professionalization in the contemporary literature?

- Issues related to self-regulation were identified by only half of the BDEMS program directors.

- Issues related to power relationships and autonomy (specifically functional autonomy and self-determination), were infrequently encountered.
- Issues related to the existence of, or creation of, a unique domain of practice over which the profession can claim exclusive expertise were infrequently encountered.

Research Question #2:

In what ways, if at all, do the directors of BDEMS programs think that paramedicine is (or is not) a profession?

- Less than a quarter of BDEMS program directors believe that, in its current form, paramedicine is clearly a profession.
- The main reasons cited by BDEMS program directors for the fact that paramedicine is not yet a profession are its lack of autonomy, self-regulation, self-determination, and lack of professional identity.

Do the directors of BDEMS programs believe that paramedicine should be (or should become) a profession?

- The overwhelming majority of BDEMS program directors believe that paramedicine should be a profession.

Do they view this to be a positive and/or negative thing (for paramedics, EMS in general, the employers of paramedics, patient care) and why?'

- Most of the BDEMS program directors feel that professionalization of paramedicine would result in an increase in the salary, benefits, and/or working conditions of paramedics.

- Many of the BDEMS program directors feel that the professionalization of paramedicine will improve the self-image of paramedics, lead to greater job/career satisfaction, and/or increase the opportunities for the self-actualization of paramedics.
- A significant majority of BDEMS program directors feel that the professionalization of paramedicine will lead to increased costs (most directly related to the need to increase salaries and benefits) to the employers of paramedics.
- BDEMS program directors feel that the professionalization of paramedicine will improve patient care.

Research Question #3:

How do the directors of BDEMS programs see the role of BDEMS programs in the professionalization of paramedicine?

- All of the BDEMS program directors recognize the teaching role of BDEMS programs in the professionalization of paramedicine.
- Half of the BDEMS program directors state that leadership development is one of the roles of BDEMS programs.
- About one third of the BDEMS program directors stated that one of the roles of BDEMS programs is to conduct research.
- About a quarter of the BDEMS program directors stated that one of the roles of BDEMS programs is to perform service and leadership in the EMS community.
- There appears to be some controversy regarding the role of advanced clinical training in the context of a BDEMS program. Some BDEMS program directors feel that graduates from BDEMS programs should have advanced clinical skills and knowledge, while

others feel that BDEMS curricula should focus on leadership, supervision, and management skills.

Research Question #4:

What do the directors of BDEMS programs see as the barriers and constraints for BDEMS programs to contribute to the professionalization of paramedicine, now and in the future?

- The vast majority of BDEMS program directors state that the lack of clear value to having a bachelor's degree in EMS is a barrier to their program's ability to contribute to the professionalization of paramedicine.
- A large majority of BDEMS program directors feel that the low enrollment in their BDEMS program is a barrier to their program's ability to contribute to the professionalization of paramedicine.
- The high cost/resource intensity and lack of curricular standards may be barriers for BDEMS programs to be able to contribute to the professionalization of paramedicine.

Research Question #5:

How do the directors of BDEMS programs feel that their programs have contributed to the professionalization of paramedicine?

- There was little consistency in the ways in which BDEMS program directors feel that their programs have contributed to the professionalization of paramedicine.
- The most frequently cited contribution that BDEMS program directors feel that their programs have made to the professionalization of paramedicine is in the area of leadership development.

- The directors of BDEMS programs feel that their programs have also contributed to the professionalization of paramedicine by providing promotional opportunities for graduates, serving as a role model for the profession, and producing well rounded graduates with an emphasis on problem solving and decision making.
- There appears to be some disagreement among the directors of BDEMS programs as to the role of a bachelor's degree in EMS as a pre-professional school undergraduate program, in that some view this positively and some view it negatively.

6.2. Recommendations

Paramedicine is at a crossroads, with three possible futures: regression, status quo, or progression. In one case, it is possible that paramedicine will be eliminated and replaced by minimally trained medical technicians that focus primarily on the *transportation* of patients from the point of injury or sudden illness to the hospital. The inability of EMS to generate clear outcome benefits in medical and traumatic injuries, coupled with continued quality of care challenges, fragmentation, and financial pressure could force the virtual elimination of advanced pre-hospital care. EMS as we know it today would be replaced with an emergency transportation system that would quickly respond, provide minimal care, and expeditious transfer to higher care. The result would be legions of transient, poorly paid, minimally trained transport technicians similar in social status, reimbursement, and mentality to nursing home aids and current EMTs.

Another more likely scenario is maintaining the status quo. Following this path, paramedicine would continue to focus on advanced prehospital *emergency* care. The occupational group would remain fragmented, inconsistent, marginalized and would continue to struggle with its identity and role in the health care system. Progress would be incremental and hard fought.

Finally, paramedicine might emerge as a true allied health profession. Following this path will likely result in paramedicine commanding comparable social status, recognition, and reimbursement to nursing, respiratory care, physician assistant, and physical therapy. This vision, advocated by the *EMS Agenda for the Future*, involves the integration of what is currently known as EMS into the overall health care system. While a variety of lower licensure levels would still exist, paramedics would emerge as the leadership of the unique domain of practice representing the nexus of public health, health care, and public safety. In addition to serving as the public's safety net in times of emergency, the mature emergency medical services would be an integral and essential component of a system designed to improve the overall health of the community.

While EMS owes a debt of gratitude to its physician and nursing colleagues, many of which have laid the foundation upon which the current system is built, realizing the vision of the *EMS Agenda for the Future* will require leadership from within. For EMS to mature and evolve, the field must assume responsibility for their own destiny. Professionalization of the paramedic subset of EMS personnel is a critical component of transition from an emergency medical system to an emerging medical service. Bachelor's degree EMS programs are in a unique position to contribute to the professionalization of paramedics and therefore paramedicine.

For bachelor's degree EMS programs to substantively contribute to the professionalization of paramedicine, a number of initiatives should be undertaken. BDEMS programs should: Collaborate with other institutions of higher learning; create value in the BDEMS degree, become a source of significant scholarship related to the discipline; and assume leadership role in paramedicine. For each of these goals, a number of specific objectives are proposed. In order to accomplish these goals, all of the BDEMS programs must invest time, energy, and resources in the collaboration, cooperation, and coordination.

6.2.1. Collaborate with Other Institutions of Higher Learning

BDEMS programs must collaborate, cooperate, and coordinate to enable paramedicine to be successful and to emerge as a significant contributor to the professionalization of the discipline.

6.2.1.1. Resurrect the Consortium of Academic Programs in EMS (CAPEMS)

There have been attempts to bring all of the programs together to discuss common issues. In September 1996, at the annual meeting of the National Association of EMS Educators (NAEMSE), a group was assembled to discuss the development of a network of the colleges and universities offering EMS degrees at the associate's or bachelor's level. Unfortunately, the conversation created some animosity, especially from members of the association that were not affiliated with such programs. Largely due to the acrimony that developed, the initiative was abandoned (Freel, personal communication, October 6, 2005).

On January 18-19, 2001, a meeting of the faculty and program directors of BDEMS programs was held with representation from ten programs. The group formed a loose affiliation named the Consortium of Academic Programs in EMS (CAPEMS). They developed a mission, vision, and critical success factors (Appendix D) and met for a second time in July 2001. CAPEMS has not met since. It is unclear why the initial enthusiasm for the group faltered.

For BDEMS programs to contribute to the professionalization of paramedicine, CAPEMS, or some other similar mechanism for the collaboration, cooperation, and coordination of the BDEMS programs should be resurrected and supported.

6.2.1.2. Build Bridges to Community College Programs

Other hierarchical professions have struggled with defining a clear difference between various levels of credential and the most appropriate education for different individuals. This is particularly true in nursing and it will continue to plague EMS unless it is addressed. A brief review of the history of nursing education policy illustrates this issue. In 1965 the American Nursing Association (ANA) published a position paper entitled Educational Preparation for Nurse Practitioners and Assistants to Nurses which stated that all educational programs that lead to nursing licensure should be housed in and sponsored by institutes of higher learning and stated that the minimum preparation for professional practice should be a baccalaureate degree (Kingsbury, 1966). While it defined an associate's degree 'technical nurse,' adoption of the

recommendations from this position paper would have meant the virtual elimination of hospital-based nursing programs.

Nursing leadership in the mid 1960s intended to eliminate hospital-based nursing programs, decrease the number of associate's degree programs, and make a bachelor's degree the educational standard for entry level nursing personnel. Forty years later, this goal has not been achieved. In retrospect, the ANA failed to consider that 78% of the nursing graduates in practice in 1965 were graduates of hospital-based nursing programs. The implication that a bachelor's degree was necessary as the entry level nursing education was a personal attack on the competence of hospital-based program graduates.

The current state of nursing education is confusing; there are three educational options for people entering the field, all leading to the same licensure. Nursing has failed to clearly identify the role of hospital-based, community college, and university programs and to differentiate among the three. EMS would be wise not to make the same mistake.

Like in nursing, an 'us versus them' mentality exists between academy (the virtual equivalent of hospital-based), community college, and BDEMS programs. While there is no question that a competitive situation exists among some programs, collaboration offers an opportunity for synergy, differentiation, and more efficient resource allocation.

A number of program directors commented that BDEMS programs are resource intensive. In general, the most resource intensive part of BDEMS programs is the paramedic training (due to

high equipment costs, laboratory training, and clinical rotations). In some locations, it may be possible for the university program to collaborate with a community college to increase efficiencies. While local considerations and funding issues must be considered, collaborating with a community college may provide an opportunity to reduce duplication of effort. Allowing community college programs to focus on diploma and associate's degree programs leading to paramedic certification while BDEMS programs focus on leadership development at the baccalaureate level may increase efficiency and allow each institution to serve a specific role. Cross registration and joint faculty appointments may provide mechanisms to allow both collaborating institutions to benefit.

Another opportunity for collaboration with community colleges is in developing articulation agreements, transfer of credit plans, and uniform policies for granting advanced standing for paramedic training.

While all of these opportunities for collaboration and articulation are important in the short term, unless EMS wants to repeat the mistakes of nursing, BDEMS programs and the EMS community should define unique roles for each level of education and clearly articulate the difference among them.

6.2.2. Create Value in the BDEMS Degree

Without question, the most common barriers identified by BDEMS program directors regarding their ability to contribute to the professionalization of paramedicine were the two interrelated

problems of no clear value to the degree and low programmatic enrollment. While numerous informants referred to the "culture" of the community as resistant to formal education, reluctant to impart additional educational requirements, and ambivalent (or in some cases, hostile) toward academic credentials, most recognized that the BDEMS programs themselves have not addressed this problem in a constructive manner.

6.2.2.1. Define the Purpose of a BDEMS Degree

According to the Council for Higher Education Accreditation (2001), a bachelor's level degree education is intended to

1. develop and deepen the capacity to think;
2. obtain knowledge on which preparation for the future depends;
3. acquire a fuller understanding of cultures;
4. strengthen the foundation for informed citizenship, participating in community live and public leadership; and,
5. sustain vocational roles and career goals.

As one informant (37) mentioned "[in our profession there is a] general lack of understanding of what is to be gained by a degree from an institution of higher education…that the purpose isn't just to stock up a bunch of credit hours…you should take music appreciation because it really will mean something in your life."

No clear purpose or philosophy emerged as to the role that BDEMS programs play in the professionalization of paramedicine was evident in analysis of the interviews with program directors. While some had very strong opinions as to the role that their program would like to, or has, played, there was little consistency in the answers. These mixed messages have resulted in considerable confusion within the community and among potential students and made it difficult to answer with a unified voice, "Why should I get a degree in EMS?" or "Why should I care if an applicant or employee has a degree in EMS?"

While "leadership development" was the most frequently cited role for BDEMS programs, it was only identified by half of the BDEMS program directors. There was little consistency in the responses with surprising lack of reference to the role of BDEMS programs in scholarship and service/leadership. Additionally, two areas of considerable inconsistency emerged in the interviews. They were:

1. the role of paramedic clinical training/advanced clinical training; and,
2. the role of BDEMS programs in preparing graduates for admission into post baccalaureate professional schools.

Some BDEMS program directors felt that the role of BDEMS programs was to create a more sophisticated clinician with advanced clinical problem solving skills. Other directors felt strongly that the goal is not to develop a better paramedic, but a better leader, supervisor, or manager.

Another area of inconsistency is the role of the BDEMS program as a pre-professional school curriculum. One informant commented about a program that was having recruitment problems until they began to market the BDEMS curriculum as an ideal pre-med major. While their enrollment increased, most of the students in the program had little to no interest in paramedicine and viewed it only as an interesting precursor to medical school. It is unclear whether this pattern of recruitment is of harm or benefit to paramedicine. It is conceivable that having members of other professions that are well versed in EMS could increase the understanding and respect for paramedicine. On the other hand, expending training resources on individuals who are not interested in remaining in the field is inefficient and losing highly educated personnel may have a negative effect on the profession. More research is needed on this issue.

For BDEMS programs to develop and communicate a clear purpose, these issues must be addressed and resolved by all of the programs. For BDEMS programs to have a significant impact on professionalization of the field, they must cooperate and agree on the *purpose* of the BDEMS degree. Not only must they develop a unified and consistent purpose, this must be reflected in each program's curriculum and be clearly articulated to the EMS community.

6.2.2.2. Define Core Competencies Expected of Graduates from all BDEMS Programs

With no curricular guidelines or common vision for the role of BDEMS programs, each director or faculty must independently develop a curriculum that made sense and fits within the confines of his/her institution. As this process was replicated fourteen times, it is surprising that the programs are not more divergent.

While a number of informants mentioned that some difference in focus and philosophy offers students a choice of various programs with a slightly different emphasis, nearly a third suggested that the lack of curricula guidelines is a barrier to the growth of the program. Even more of the informants commented on the need for collaboration and coordination with other BDEMS programs.

For BDEMS programs to be able to contribute to the professionalization of paramedicine they must develop a set of core competencies for graduation that all programs adopt. This process will take time, but should start immediately, and be allowed to evolve over time. At first, the common core competencies may be small in number, but will likely increase over time. By starting this process now, BDEMS programs can begin to present to the community a clearer picture of the value of a bachelor's degree in EMS as well as some tangible and marketable skills that graduates can bring to the marketplace. Progressive employers may begin to incorporate educational expectations of graduation from a BDEMS program into the hiring or promotion requirements.

The programs would be well advised to include national communities of interest in the process of identifying those core competencies. Involving a broad base of key informants in this process would provide the insight of the potential employers of the graduates from BDEMS programs, as well as serve as an important opportunity to demonstrate that BDEMS programs are responsive to the needs of employers. This process may help to decrease perceptions that BDEMS programs are isolated in the ivory tower; too impractical and run by academicians who do not

really have an appreciation for the true challenges of the real world of EMS. Convening a meeting of key opinion leaders from across the nation would be an excellent opportunity to engage the community in a discussion about what is expected of BDEMS graduates. This may provide greater access to BDEMS program graduates to the 'best jobs', creating value in the degree.

6.2.2.3. Engage in Joint Marketing Initiatives

Most BDEMS programs' resources are quite limited and spread thin. Presumably, their marketing budgets are commensurately limited. This creates a vicious cycle of small program➔limited resources➔small marketing budget➔small program that is hard to break. Another opportunity for collaboration among the BDEMS programs is to pool marketing resources and engage in joint marketing activities.

In particular, advertisements in trade magazines would raise the visibility of baccalaureate level education in EMS to both prospective students and employers. While CAPEMS currently has a website, it is little more than a list of programs with hotlinks to each program's respective website. Pooled resources would enable BDEMS programs to have considerably more exposure than any individual program could afford to support individually.

6.2.3. Become a Source of Significant Scholarship Related to the Discipline

There has been insufficient academic commitment to EMS research, and this has contributed to the dearth of scientific knowledge necessary to support EMS practices (Delbridge *et al.*, 1998). *The National EMS Research Agenda* (National Highway Traffic Safety Administration, 2004) stated that "there is not enough high quality EMS-related research to drive improvements in patient outcome and vast amounts of money are being spent for patient care with little rigorous evaluation of the effectiveness of that care." They identify two primary barriers to developing strong EMS research programs; a paucity of highly skilled EMS researchers and inadequate funding. BDEMS programs are in a position to address these barriers by providing an environment in which EMS researchers can work and attract research funding.

The BDEMS program directors recognize the role of research in the definition of a profession. The overwhelming majority of BDEMS program directors mention research as part of the process of professionalization, and many commented that BDEMS programs should be playing a role in generating research. Two issues regarding the role of scholarship in BDEMS programs emerged during the interview process: 1) a lack of clarity regarding the role of research training within the BDEMS curriculum, and 2) a lack of expectation of BDEMS program directors that faculty should be producing scholarly work. In order to contribute to the professionalization of paramedicine, BDEMS programs must recognize their role and responsibility in creating new knowledge about the discipline. This leads to two specific recommendations: 1) clarify the role of teaching research in the BDEMS program, and 2) insist that BDEMS program faculty focus on producing scholarly work, and ensure that they have adequate support for this work.

6.2.3.1. Clarify the Role and Expectations of BDEMS Programs in *Teaching* Research

Numerous BDEMS program directors commented about the fact that their program *teaches* research within their curriculum. Despite the fact that most programs place some emphasis on teaching research skills in the context of the curriculum, most of the program directors perspectives on teaching research seem to be naive.

Building the research skills necessary to become a principal investigator typically requires significantly more time than is available in the context of a bachelor's degree program. While it seems entirely reasonable for graduates of BDEMS programs to be familiar with the research process, to value the role of evidence-based medicine, and to possibly participate in the research process under the guidance of a more experienced researcher, it seems unlikely that large numbers of bachelor's prepared individuals will have adequate training to be researchers themselves.

A more realistic approach to the role of the BDEMS program curricula in terms of research competencies would be to prepare students in the BDEMS program for admissions to graduate programs that would have adequate time to develop true research competencies. While the *National EMS Research Agenda* (National Highway Traffic Safety Administration, 2004) specifically recommends that "academic institution should develop training pathways for EMS professionals interested in pursuing a research career," it seems likely that this pathway will begin, not end, with the bachelor's degree in EMS.

6.2.3.2. Insist that BDEMS Program Faculty *Conduct* Research

As stated earlier, it was surprising to note the *lack* of emphasis that the BDEMS program directors as a whole placed on the program faculty conducting research. This is clearly different from other professions where the "university itself provides that professional pursuit to most of the intelligentsia and the intellectuals who are concerned with the transcendent and the teleological" (Freidson, 1986).

Clearly a number of barriers, both endemic to EMS in general, and in BDEMS programs specifically need to be overcome to address this issue. First, there are comparatively few formally trained EMS researchers. The overwhelming majority of researchers publishing EMS related work are physicians (National Highway Traffic Safety Administration, 2004). Compared to other disciplines, BDEMS faculty have modest academic credentials. Additionally, BDEMS programs tend to be small in terms of enrollment and faculty and are resource intensive. This creates a situation in which faculty have high teaching loads and must perform administrative/coordinator functions that interfere with their ability to engage in scholarly activities.

Despite those challenges, for BDEMS programs to contribute to the professionalization of paramedicine, they must emerge as the research leadership within the profession. Fundamentally, universities are institutions committed to research. They have an infrastructure designed to support, encourage, and stimulate scholarly endeavors. Typically, faculty are expected to produce research as well as generate grant support for the support of research. Senior faculty are expected to support and mentor junior faculty while they build their research

experience and track records. Research productivity is rewarded with academic promotion. For BDEMS programs to fully participate in the professionalization of paramedicine, they must enter, and embrace, this arena. However, there are two main barriers to assuming this role: lack of funding for EMS research and limited research competencies and experience among BDEMS faculty. Both of these barriers are well documented in the EMS literature, and can be overcome with time.

Most EMS research has been conducted on shoestring budgets using volunteer labor, surplus supplies, and in-kind contributions from hospitals, medical schools, and EMS agencies. In 1999, the record year for the United States Public Health Service (PHS) funding of EMS, only 3.8% of the 794 peer reviewed EMS publications cited in PubMed had received PHS funding. This challenge was identified by some of the BDEMS program directors, as represented by the following comment from informant 29, "one of the weaknesses or difficulties with EMS is we don't have a lot of good streams for external funding" (National Highway Traffic Safety Administration, 2004).

A closely related issue is that of protected time to engage in scholarly activities. The *Research Agenda* (2004) states:

> "Protected time for faculty engaged in research is not adequate in most academic Departments of Emergency Medicine and degree granting institutions offering EMS provider education. Protected time is necessary to ensure research productivity. Developing faculty requires making an investment in them. Academic departments need to invest in EMS research by supporting adequate release time for researchers, and senior faculty should invest in EMS research by serving as mentors to novice researchers." (p. 19)

The problem of lack of EMS funding is a vicious cycle. With limited funds it is difficult to attract top researchers. Consequently, the research is scant and of comparatively poor quality. Poor quality and low quantity of research leads to lack of interest in research in the discipline, with correspondingly limited funding. And so the cycle repeats. This problem has been identified at the national level, and it is expected that the funding for EMS research will increase in the next 5 years. BDEMS programs must position themselves to take advantage of these new funding streams by supporting their faculty's research. Such positioning will help break the cycle of inadequate EMS research funding.

The second challenge facing BDEMS programs' ability to conduct research is the lack of research competencies and experience of the existing faculty. As the main focus of most BDEMS programs has been teaching, most programs have neither recruited for, nor expected, research productivity from their faculty. This challenge, although related to the lack of funding, can be addressed in the long term by implementing a number of strategies:

1. encourage existing BDEMS faculty members to collaborate with other faculty members, especially those in other programs and schools, to build research competencies;
2. begin to recruit BDEMS faculty members who already have research skills, interests, and experience;
3. strive to create and protect time for scholarly activities, and
4. expect and reward scholarly excellence.

Perhaps most importantly, BDEMS program directors must serve as role models for faculty members and the EMS community, demonstrating that paramedics are capable of significant

research productivity and scholarly activity, and are able to meaningfully contribute to the creation of the body of literature of the profession.

6.2.4. Assume a Leadership Role in Paramedicine

In most established professions, university faculty members assume prominent positions of leadership and service to the professional community. University faculty members are expected to perform service and function as leaders as part of their academic responsibilities. This is an integral way that universities serve society in general and professions specifically. In most professions, university faculty represent the knowledge and intellectual elite of the profession. The institution supports and rewards their active participation in service and leadership.

This role was generally unrecognized in the interviews with BDEMS program directors. A number of informants commented that, like release time for scholarship, it is difficulty to perform significant leadership and service activities if the teaching and coordination load on faculty members is excessive. Unlike research activities, there are very few funding opportunities for professional service or leadership roles. At best, these activities are revenue neutral in terms of direct expenses, and clearly a loss when one considers the cost of lost opportunity. Despite that fact, universities expect, support, and reward leadership and service roles for their faculty.

It appears that this commitment has not been made in terms of BDEMS programs. There are three main opportunities for BDEMS programs to assume a position of leadership within the

EMS community: advocate for the emergence of paramedicine as a discipline that is different from all other levels of EMS personnel; create a unique domain of practice over which paramedicine can make a legitimate claim of exclusive expertise; and support new BDEMS programs.

6.2.4.1. Advocate for the Emergence of Paramedicine as a Discipline Different than the Other Levels of EMS Personnel

EMS, like a number of other allied health professions and nursing, has a stratified training, education, and credentialing system. Unlike most other stratified health occupational groups, EMS has a tradition of viewing the levels as sequential, hierarchical, and progressive. In fact, one must be certified as an EMT-Basic *prior* to entering more advanced (intermediate or paramedic) training. The prevailing notion in EMS is that EMT-Basic training forms the foundation of more advanced training, and must be mastered prior to progression. It is a common notion that "you must be a good EMT before you can be a good paramedic"; however, this position has never been tested. Informant 40 questioned the conventional wisdom:

> "Medical school doesn't make you go to a PA school first. You don't have to be Physician Assistant to be a physician. So, I am still befuddled by the fact that you have to be an EMT to be a paramedic. I will probably go to my grave saying that biggest EMS mistake at the ALS level was in that what we should have done was to have one curricula where we take John Q. Public who says 'I want to be a professional paramedic,' and integrate the context and constructs of all of what makes up medical and trauma and patient care and that there is no line of demarcation and therefore when they are doing patient care, they are doing whole patient care vs. the idea of just thinking in the higher domain of this skill set."

In reality, this is a very politically sensitive area in the EMS community. From the first EMT-Basic class, new students are repeatedly told that they are "health care professionals." The

rhetoric of the EMS leadership tends to state that *everybody* in EMS is a professional. In all likelihood, what is being espoused in this context is the fact that the occupational group expects comportment consistent with certain behavioral norms, generally described as "acting like a professional." EMT-Basics are fiercely proud of their role in the EMS system and outnumber paramedics by a ratio of 4 to 1. Comments or implications that the EMT-Basic level is "not a profession" or that an EMT-Basic is not a professional draw harsh criticism and deeply emotional responses.

Despite that fact, there is a difference in terms of professionalization of paramedics and EMT-Basics. There is a potential detriment to the professionalization of paramedicine by being tied to the attributes of the EMT-Basic. EMT-Basics typically have minimal training, minimal abilities and skills, and are not part of the profession the same way as paramedics. It is difficult for the general public to differentiate EMT-Basics from the paramedics and may ascribe assumptions regarding the relative lack of training to higher level individuals.

BDEMS programs should seek a way to separate the issues of paramedicine from that of the other levels of EMS personnel, without *denigrating their significant contribution*. Paramedicine must differentiate itself from the other levels of EMS personnel. One way to do so would be to expand the domain of paramedicine while having lower level personnel continue to focus exclusively on being a medical technician focused on the emergency care of patients who are suddenly ill or injured out of the hospital.

6.2.4.2. Create a Domain of Practice Known as Paramedicine

EMS represents the intersection of public safety, public health, and health care systems (National Highway Traffic Safety Administration, 1996). This observation recognizes a unique body of knowledge that is neither public safety, public health, nor health care, but rather the nexus of the three.

While this unique role was proposed almost ten years ago, EMS has remained largely a subset of emergency medicine practiced out of the hospital in a public safety model. Efforts to expand the role of EMS have been difficult due to political opposition and occupational inertia. While it has been challenging for EMS overall to move forward, it represents an opportunity for the highest level provider, paramedics. Paramedicine should look toward an expansion of their role beyond an exclusive focus on prehospital emergency medical care. Other levels of EMS provider should continue to have a comparatively narrow, but important, focus on acute, life threatening emergencies.

One of the clear opportunities of BDEMS programs is to increase the breadth, as well as the depth, of competencies of graduates. BDEMS programs are under less pressure than academy or community college programs to produce an individual that is clinically competent as quickly as possible. BDEMS programs have more time, and therefore more curricular opportunities to broaden the horizons of their students. Specifically, and consistent with the *Agenda*, they should include coursework and competencies in public health and health care systems.

Most BDEMS students self-select the program, as opposed to attending as a job requirement or looking for the fastest route to attaining a paramedic credential. Therefore, BDEMS programs have more flexibility to require alternative coursework that may not be clinically focused. Even modest expectations regarding competencies in the basic principles of public health and health care would be a significant increase over what paramedics are currently expected to demonstrate. Lack of exposure to these other disciplines has resulted in a continuation of paramedicine having a narrow focus which is largely a subset of emergency medicine.

Volunteers have been an integral and essential part of EMS from the very beginning. Especially in rural environments, the economics of emergency services makes if virtually impossible to pay all personnel necessary to ensure a reasonable response time. It is unlikely that EMS financing is going to change to such an extent that EMS could possibly eliminate reliance on volunteers. The impact on volunteers has long been an argument against change in EMS, as reflected in the following comments:

- "There is an area when you say professionalism of paramedicine there is an area that people consider walking on egg shells, and that is volunteerism. Now certainly I have been a volunteer and I am not really trying to slam the volunteer. I understand where everyone comes from, but our profession is so driven by volunteers that sometimes that hurts us more than it helps. Particularly, some of the large stats I have ever seen is 78-79% of EMS nationwide is volunteer. And I know this has been a debate and continues to be a debate, volunteer vs. paid. Can you be a volunteer professional?" (52)

- "EMS has a very rich history and long history of volunteerism and you know that has been great, for the most part. A lot of communities you know, they certainly want to pay police but they are satisfied with a volunteer fire department and to some extent they were satisfied with volunteer EMS. But over time, I think there have been some problems that have arisen from that in that if you are a volunteer fireman, you have a call about once a week. If you are a volunteer paramedic you have got a call about 8 times a day." (58)

- "Maybe I am just reflecting on my own fear at being not able to get it done. I don't know that I can help drag…[name] volunteer fire. So that is troubling to me." (37)

- "If you want to become a paramedic you have to meet this standard. Not, 'Wow we're sorry that you're a volunteer so therefore instead of you meeting this expectation we are going to let you now be substandard.' Which again, you know happens right now; as a career person you need 100 hours of continuing education as a volunteer you only have to do 20. Again, I think that is what hurts EMS. Nothing against volunteerism, I respect the people that volunteer but when they want to come in and do less than the standard because they are volunteer, it dilutes our movement anywhere close to a profession. There are not volunteer respiratory therapists, there are not volunteer dental hygienists, and there are no volunteer nurses for the most part, on a large scale. You look at some of these areas that have made great progress, I don't even now if I could say for sure that they're in this profession yet, but they are much closer than we are, and they don't have large numbers that volunteer." (72)

Twenty four percent of EMT-Basics are affiliated with volunteer EMS agencies, while only 3.34% of paramedics were so categorized (National Registry of EMTs, 2005). While it is true that changes that impact volunteerism can have a profound effect on EMT-Basics, it is unlikely that they significantly effect paramedics due to the relatively low proportion of volunteers amongst their ranks. Unfortunately, folklore prevails ("78-79% of EMS nationwide is volunteer" (52)) as most people significantly overestimate the percent of volunteers in EMS at all levels.

A few informants commented about the future of volunteerism at the paramedic level.

- "We need to move the people that are actually providing a high level of direct intervention into the mindset of education, research, accountability and growth that should be embraced by the term profession. (29)

- "I don't think it is realistic to believe that we can rely upon volunteer paramedics anymore." (58)

Therefore, it may be easier to move EMS as a group forward not by trying to move the entire workforce, but rather to change the top 20% by incorporating a more public health/health care focus in the BDEMS curriculum. A number of informants specifically commented that improving paramedicine would most likely have a positive effect on the entire system.

For BDEMS programs to contribute to the professionalization of paramedicine, they must help to create a unique domain of expertise representing the intersection of health care, public health, and public safety. Rather than this representing a sub-set of any of the three, it must be a domain of practice over which Paramedics can make a legitimate claim of exclusive expertise.

6.2.4.3. Support New BDEMS Programs

It may seem counterintuitive to recommend that existing BDEMS programs support new programs, especially in light of the fact that most program directors commented that they are currently operating below their optimal student enrollment. In theory, increasing the number of programs could threaten the survival of borderline programs by spreading the potential student pool too thin. While that is possible, a prevailing theme among the informants was that the culture of EMS did not fundamentally support a bachelor's level education leading. Thus, *BDEMS programs do not compete against each other for students, but rather they compete against a mindset within the discipline that a bachelor's degree in EMS has limited value.* Investment in new program development will help reach the critical mass necessary for long term success.

Therefore, for BDEMS programs to contribute to the professionalization of paramedicine, they should work together to support and encourage new programs. Doing so will increase the visibility of higher education's role in the discipline and help reach a tipping point where a bachelor's degree is more recognized and accepted.

As is often the case, collaboration, cooperation and coordination are the keys to long term success. During the interviews, many program directors commented about the fragmentation of the BDEMS programs and their personal feelings of isolation. While this research suggested that there is little in common regarding the definition of a profession and great disparity among the current BDEMS program directors regarding the role that BDEMS programs should play in the professionalization of paramedicine, one thing was clear. All of the BDEMS program directors are facing common challenges. Many program directors commented specifically about the need for collaboration among the programs. There are only fourteen programs in the country. Through leadership, discipline, collaboration, cooperation, and vision, the current bachelor's degree EMS programs can play a significant role in the professionalization of paramedicine to the benefit of EMS, paramedics, the patients that they treat, and most importantly, society as a whole.

EMS is a relatively young field. In many respects the discipline has gone far quickly, but in other ways the profession has a long way to go. This is an exciting time for EMS, and the opportunity is now for BDEMS programs to join together and take a leadership to positively influence the evolving profession of paramedicine. All will benefit.

"We will surely get to our destination if we join hands."

Aung San Suu Kyi
Burmese political leader (1945-)

7. EPILOG

A particularly insightful opinion was expressed during one of the interviews that seemed like a fitting epilog, as well as an important reality check.

> "We talk about professionalism like it's this wonderful thing…this holy grail that we are seeking and once we get there is going to be this rapture and suddenly all of EMS's problems will be solved with us now being a profession. I think people need to have realistic expectations of what this will actually mean….it is good that we have a common purpose to strive for as a profession, a focus, but we just need to have a realistic expectation of what being a professional means. I think we need to go a long way for the person who has been doing this for 50 years as a volunteer in Podunk to not feel that they are being passed by the trend because that may be the only person that is going to come when Granny has a heart attack, so we still need to go back to those people and offer them something with professionalism. We can't be too highfalutin with this…but the big thing we have to do is to really decide 'who' we are. The leaders of associations have to get people to feel positive about professionalism and to not fear it." (81)

Wise words indeed.

APPENDICES

Appendix A: Interview Introduction

Good (morning/afternoon/evening) and thank you for taking time to meet with me. My name is Gregg Margolis, and I am conducting a research study about the role of Bachelor's Degree EMS Program in the professionalization of paramedicine. For that reason, I will be interviewing a number of the Directors of Bachelor's Degree EMS programs. You were selected to participate in the study because you are currently serving as the Director of a BDEMS program.

If you are willing to participate, I will ask you a number of questions regarding your opinion of professionalism, paramedics, and education. There are no foreseeable risks associated with this project, nor are there any direct benefits to you. Your identity will be kept strictly confidential, and no names will be attached to your comments. All responses are confidential and results and interview tapes will be kept under lock and key.

Your participation is voluntary, and you may withdraw at any time. This study is being conducted by Gregg Margolis, who can be reached at 614-855-5533 if you have any questions. Are you willing to participate in this study?

If yes…

Thank you. Before we begin, let me suggest some things that will make our interview more productive:

- There are no "right" or "wrong" answers, because everyone's perspective, opinions, and experience are different. I am interested in your thoughts on these issues, so please be as honest and frank as possible.
- I will be tape recording the interview to be sure that I accurately record your thoughts and comments. I may ask you to repeat a thought or idea to be sure that I understand your answer. I may also reflect back to you what I think you meant in slightly different words to be sure that I am clear.
- For the purpose of this study, I am looking only at the paramedic subset of EMS providers. I will refer to "paramedicine" as the domain of practice of paramedics.
- My role here is to ask questions and to listen. I want you to feel free to express your opinions, thoughts and ideas. I'll ask questions related to the topic and move the discussion from one question to the next, to try to keep us on track so that we can finish in one hour.
- Please let me know if you need a break.
- Do you have any questions before we begin?

Appendix B: Interview Guide

1. How do you define a profession?

2. What do you feel are the characteristics of an occupation that is viewed as a profession?

3. Do you consider paramedicine *to be a* profession?

4. Do you think that paramedicine *should be* (or should become) a profession?

5. Do you think that the professionalization of paramedicine is a positive or negative thing?

6. What do you think will be the effect of a professionalization of paramedicine
    a. on paramedics?
    b. on EMS in general?
    c. On the employers of paramedics?
    d. on patient care?

7. How do you see the role of BDEMS programs in the professionalization of paramedicine?

8. What are the barriers and constraints for BDEMS programs ability to contribute to the professionalization of paramedicine?

9. Why do you think that there are not more BDEMS programs?

10. In what ways do you feel that your program contributes to the professionalization of paramedicine?

11. Do you anticipate any changes in your program specifically to address the issues of professionalization of paramedicine?

12. Are there any issues about the role of BDEMS programs on the professionalization of paramedicine that I did not ask or that you would like to talk about?

Appendix C: Demographic Questionnaire

Informant Number (completed by PI): _____

Educational Experience

Please list all of your education beyond high school and approximate completion dates:

Institution	Course of Study/Degree	Completion date

EMS Experience

Are you currently practicing as a paramedic?

[ ] Yes; how many years? _____

[ ] No

Were you ever a practicing paramedic?

[ ] Yes; how many years? _____

[ ] No

Other Health Care Experience

Please list all of your clinical credentials (for example (Paramedic, RN, MD, RT, etc.) and years of experience of each

Credential	Specialty	Years of experience

Academic Experience

How long have you been in academics on a full time basis? _____

What is your current academic rank? _____

At what academic institutions have you held/do you hold academic appointments?

Appendix D: Consortium of Academic Programs in EMS (CAPEMS): Mission, Vision, and Critical Factors for Success

Mission:

Our mission is to improve the profession of EMS through high quality baccalaureate EMS education.

Vision:

EMS is recognized as an academic discipline worthy of study at the baccalaureate level.

Critical Success Factors:

We seek to accomplish these tasks by:

* Defining standards, competencies and outcomes;
* Promoting bachelor level EMS education;
* Addressing accessibility to bachelor level EMS education;
* Responding to the communities of interest;
* Promoting research; and
* Engaging in political process.

Source: (CAPEMS, 2002)

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