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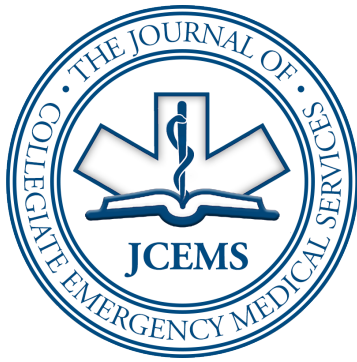
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COLLEGIATE EMERGENCY MEDICAL SERVICES

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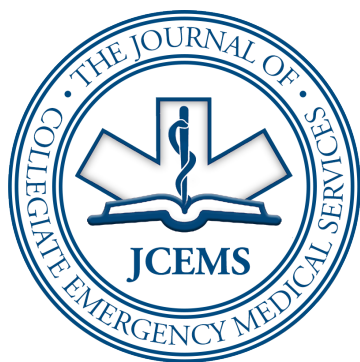
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Research and Scholarship in Collegiate Emergency Medical Services: Current State and Opportunities for Progress

JCEMS and NCEMSF are spearheading the drive to promote research and scholarship in the field of campus-based prehospital emergency care.

Nicholas M.G. Friedman, BA, EMT-B; **Brittany J. Dingler**, BA, PA-S; **Jose V. Nable**, MD, MS, NRP; **George J. Koenig**, DO, MS

Over the last twenty-five years, the collegiate or campus-based emergency medical services (CBEMS) community has evolved at an impressive rate, and new CBEMS organizations are instituted nearly every year. Although organizations dedicated to campus-based EMS trace back to at least 1948¹, the establishment of the National Collegiate EMS Foundation (NCEMSF) in 1993 marks a seminal event in the history of collegiate EMS. Prior to the establishment of NCEMSF, CBEMS organizations struggled to efficiently share resources and network with each other. Further inhibiting the advancement of collegiate EMS, a bias towards CBEMS organizations existed within the broader EMS community. Despite the fact that CBEMS organizations staffed licensed EMS providers, there was

Key Points

Problem: There is a lack of CBEMS-related research and scholarship in the literature.

Opportunity: Situated at academic institutions, CBEMS organizations are well positioned to conduct research and to produce publishable scholarship.

Progress: In partnership with NCEMSF, JCEMS developed the first peer-reviewed journal in the field of campus-based prehospital emergency care. JCEMS and NCEMSF seek to motivate and support research efforts.

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a perception that CBEMS organizations provided a lower quality of care than traditional EMS services. To promote the advancement of collegiate EMS, NCEMSF facilitated communication between organizations and developed a robust network of supportive alumni and professionals. In addition, through education and advocacy, NCEMSF provided CBEMS organizations with the legitimacy needed to gain the approval of the EMS community. Without question, NCEMSF has markedly progressed the field of college health and safety.

Yet, notwithstanding the opportunities facilitated by NCEMSF, a gap exists in the scholarly literature

and in popular sources on CBEMS. In this editorial, our aim is to motivate research and other scholarly efforts within the CBEMS community. We will articulate the gap in the scholarly literature and identify why CBEMS organizations are well positioned to overcome the barriers associated with EMS research. We will then discuss how NCEMSF and *The Journal of Collegiate Emergency Medical Services* (JCEMS) will foster collaboration within the CBEMS community to build a culture of research and scholarship.

Gap in the Literature

The lack of research and evidence-based guidelines supporting clinical and policy decisions in prehospital emergency care has been repeatedly articulated. Relative to other healthcare fields and medical specialties, EMS is in its infancy; only in the 1960s and 70s did influential publications^{2,3} and impactful legislation^{4,5} carve a path for the development of modern EMS systems. Yet, as EMS systems grew, a vigorous research apparatus failed to develop. In 2001, the National EMS Research Agenda⁶ – published with the support of the National Highway Traffic Safety Administration and the Maternal and Child Health Bureau of the Health Resources Services Administration – identified a distinct lack of high quality, methodologically rigorous, EMS-related research within the domains of clinical care, systems design, and educational practice. Building upon the agenda, the Institute of Medicine's (IOM's) Committee on the Future of Emergency Care in the United States Health System published "Emergency Medicine at the Crossroads" in 2006.⁷ The report reiterated the lack of existing EMS-related research to guide improvements in patient outcomes, and also provided further recommendations to expand the evidence base supporting clinical interventions and systems development. Since the publication of the National EMS Research Agenda and the IOM's report, EMS-related research has expanded and fruitful efforts have been undertaken to translate research findings into practice through the development of evidence-based guidelines.⁸⁻¹³ In fact, the recent recognition of EMS as a distinct boarded medical sub-specialty by the American Board of Medical Specialists in 2013¹⁴ highlights a respect for EMS as a distinct fund of scientific knowledge, primed for original research and other scholarly works. However, despite advancements in EMS research, there

is a continued recognition that EMS trails far behind other medical fields with respect to research.

Of concern in the current editorial is the dearth of published original research and related scholarship (eg, case reports, clinical reviews, and perspectives pieces) in the field of CBEMS. Even relative to the lack of scholarship within the traditional EMS community, CBEMS-related scholarly work is scarce. To our knowledge, less than a dozen research papers or case studies that are specifically focused on CBEMS have been published in the scholarly literature (ie, academic journals). Most of these articles have been published in scholarly journals that specifically cater to EMS medical directors (eg, *Prehospital Emergency Care* and *Prehospital and Disaster Medicine*) or career college health professionals (eg, *Journal of American College Health*), rather than CBEMS leaders, providers, or affiliated professionals. Even in popular sources (ie, magazines or websites), articles describing CBEMS only rarely surface. Certainly, research and scholarship focused on traditional prehospital emergency care is of relevance to the CBEMS community; nonetheless, the unique structure of CBEMS organizations and the particular environment within which CBEMS organizations operate underscore the need for focused research projects and a targeted source of literature.

CBEMS organizations differ in significant ways from traditional EMS services. CBEMS organizations are uniquely situated on university and college campuses, which are characterized by complicated physical layouts,¹ frequent mass gathering events (eg, stadium sporting events, music festivals),^{15,16} and highly-populated, confined areas.¹ Although a large-scale survey of CBEMS patient encounters has yet to be undertaken, it is widely understood that CBEMS organizations serve a challenging demographic. To wit, CBEMS organizations must simultaneously be prepared to care for college-aged individuals – who may present with distinct clinical, social, and psychological needs – as well as faculty, staff, and campus visitors of all ages. CBEMS organizations are licensed to provide care at the basic life support (BLS) or advanced life support (ALS) level; however, providers are typically undergraduate [or, less frequently, graduate] students who serve within an organization for no more than four years.¹ Moreover, unlike traditional EMS services, CBEMS organizations generally receive oversight

from campus health centers, campus safety departments, or student government bodies.¹ Given the unique environmental, clinical, and organizational challenges inherent in the provision of on-campus emergency care, it may not always be appropriate or feasible to translate research and scholarship designed for traditional EMS services into the practices of CBEMS organizations.

Opportunities for Growth

The paucity of literature represents an exciting opportunity for the CBEMS community. CBEMS leaders and providers may now conduct original research and scholarship in an under-explored field, fostering the advancement of CBEMS while simultaneously promoting their own professional and scholarly development. By conducting research and preparing scholarly work for peer review, CBEMS leaders and providers can identify best practices to share with the entire community. Student-providers are in a particularly strong position to produce research and scholarship and to translate findings into practice. In contrast to traditional EMS agencies that operate outside of academic institutions, CBEMS organizations operate within colleges and universities designed to foster inquisition and investigation. Likely, the majority of CBEMS leaders and providers are already actively engaged in scholarly endeavors and aspire to pursue careers in intellectually rigorous fields. Thus, the CBEMS community represents a cohort of motivated, curious, and academically-minded individuals who are eager to both practice and *advance* medicine. In fact, the development of a cadre of CBEMS researchers may be a route to the promotion of research that extends beyond campuses into the broader field of EMS. Ultimately, while the lack of scholarship within the CBEMS community is cause for concern, this community is uniquely prepared to support scholarly endeavors.

Challenges to Conducting Research

While many barriers that hinder research efforts within traditional EMS communities across the world have been identified over the last two decades,^{6,7,17-23} the CBEMS community is well-positioned to overcome them. These barriers may be broadly grouped into seven domains: Data Collection, Ethical Conduct, Funding Sources, Competing Obligations, Continuity of Leadership, Education and Mentorship, and Culture and Values.

Data Collection

Collecting data on patient encounters is complicated by the fact that patients are often treated by providers from multiple EMS organizations and facilities, who may be reluctant to share data. In addition, for CBEMS organizations in particular, low call volumes create challenges for compiling enough data points to conduct studies with sufficient statistical power. Few efforts have been undertaken to systematically compile data from multiple CBEMS organizations,^{1,24,25} which may reflect a lack of standardization in data collection practices; organizations collect data via either pen-and-paper or electronic means and may not collect the same types of data points. In addition, organizations may inconsistently collect data points²⁶ or may apply differing data definitions from each other (eg, defining an encounter with an intoxicated patient as either a medical or a behavioral call). Lastly, appropriate data analysis may require a consistent definition of CBEMS-specific patient encounters. For example, it remains to be determined whether CBEMS responses to off-campus incidents should be analyzed in aggregate with or separately from on-campus incidents.

Despite challenges in data collection, CBEMS providers are well positioned to methodically collect data by coupling their academic backgrounds with the opportunities provided by NCEMSF. Specifically, NCEMSF hosts an organizational database²⁷ which has the potential to serve as a rich source of information on CBEMS organizations, provided the database is regularly updated by each organization. In addition, NCEMSF has developed a cardiac arrest response registry,²⁸ which represents a preliminary model for large-scale, clinical-based data collection. Lastly, the regional coordinator system of NCEMSF provides a networking route for organizations to compile sufficient data to appropriately power studies.

Ethical Conduct

Prior to conducting studies on human participants to contribute to generalizable knowledge (ie, publishable research), approval from an Institutional Review Board (IRB) is required. Although IRBs may not be familiar with standard EMS practices, IRBs serve to ensure that research will be conducted ethically. For example, IRBs ensure that participants or patients will be capable of providing informed consent – or appropriately exempted – and that their privacy will be respected. Prior to

submission of an application to an IRB, researchers must determine (1) when, how, and by whom informed consent must be obtained, (2) how to properly de-identify participant or patient information in compliance with HIPAA, and (3) how to properly obtain patient information from entities involved in the continued care of patients (eg, receiving hospitals). Obtaining informed consent in the prehospital, campus-based environment is complicated by the facts that patients may present with debilitating conditions and that students may be considered “vulnerable populations.” Nonetheless, applying for IRB approval is commonplace at academic institutions, whereas a traditional EMS service may not even have readily available access to an IRB. Due to the stringent guidelines mentioned, preparing a proposal to an IRB should be seen as an opportunity to develop an appropriately- and ethically-designed study that can push collegiate EMS further in both research and patient care.

Funding Sources

Acquiring funding may be difficult because grants may be limited at the federal, state, and local levels, and because submitting applications for funding is time-consuming and, often, complicated. Thankfully, research funding is typically, and often easily, obtained from university-wide grants or from specific academic departments. Academic institutions often pride themselves on their support of student initiatives that supplement classroom education and promote student health and safety. Local and regional funding sources may also be interested in supporting CBEMS organizations within their jurisdiction, particularly organizations that respond to calls in the broader, off-campus community.

Competing Obligations

Research is often time-consuming, and may be seen as secondary in priority to clinical and administrative duties. CBEMS providers, however, are often ambitious individuals who are inclined to pursue multiple projects and responsibilities at any given time. These student-providers are not only motivated to be intensely involved in EMS, but also various extracurricular activities, jobs, and research within their respective academic disciplines. In fact, by conducting CBEMS-related research, student-providers may find a way to bridge their academic and EMS-related obligations and interests.

Continuity of Leadership

For organizations staffed primarily by students, annual or frequent staff turnover may hinder continuity of leadership throughout long-term research projects. Long-term research projects may also be interrupted by breaks in the academic calendar. Fortunately, CBEMS organizations are adept at transitioning clinical and administrative leadership duties over time, thereby affording the opportunity to link research and scholarly projects to existing systems of leadership transition. CBEMS organizations also typically receive oversight or supervision from professional staff and advisors who may provide continuity of support for research projects.

Education and Mentorship

A focus on research is frequently absent from standard EMS courses. As a result, providers often lack the requisite knowledge and technical expertise required to conduct methodologically rigorous EMS-related research studies on their own. In addition to a lack of familiarity with relevant research methodologies, providers may not know how to obtain Institutional Review Board approval, acquire funding, recruit collaborators and participants, or prepare their research for presentation or publication. CBEMS providers, however, are often deeply engaged with scholarly endeavors outside of EMS, offering a route for the development of relevant expertise. CBEMS providers also have access to faculty support within their respective academic institutions, as discussed later in the “Collaborative Research and Scholarship” section.

Culture & Values

Perhaps the greatest barrier to producing CBEMS-related research and scholarship is the prevalence of a culture that does not prioritize, value, or recognize the need for scholarship. Most of the scarce CBEMS-related peer-reviewed articles [or published abstracts] have been produced by NCCEMSF^{1,25} or Georgetown University,^{15,16,26,29-31} suggesting that conducting CBEMS-related research has not been a priority for most organizations and providers; in fact, research needs and opportunities are typically absent from most discussions about organizational development. As a result, CBEMS providers may not recognize the tightly-knit relationships between innovative research, organizational development, and improvements in patient care. However, despite the lack

of a rich scholarly culture, the CBEMS community values personal growth, innovation, and service. Scholarship and research – when linked to improvements in practice – strongly support the CBEMS community’s values and commitments.

Collaborative Research and Scholarship

Many of these barriers can be overcome by exploiting one of the characteristics that best defines CBEMS: collaboration. Developing a culture of scholarship within the CBEMS community will require a dedicated effort to promote collaboration within CBEMS organizations; between CBEMS providers, professional clinicians, and academic faculty; and between multiple organizations.

Collaborative research fosters camaraderie and builds community. Collaborating with students from multiple disciplines is also essential to attacking research questions that do not fall neatly within one academic purview. The advancement of CBEMS is an inherently multidisciplinary pursuit that will require rigorous investigations of clinical practice, organizational management strategies, administrative and financial policies, educational methods, technological developments, ethical decision-making, provider mental health, and far more. Improving organizations through research and scholarship will require the involvement of students from many academic disciplines. For example, a study designed to identify the factors that lead to post-shift stress in a population of providers might benefit from the involvement of a student in the exercise science department (to help measure physiological stressors) and a student in the psychology department (to capture psychological stressors).

In addition to collaboration between students from multiple disciplines, collaboration with CBEMS’ partners in care (ie, health centers, campus safety, and traditional EMS) and faculty are essential. Faculty members are able to draw upon their knowledge of various research methods and relevant processes (eg, applying for funding, submitting IRB proposals, and preparing publications). Students can pair their own enthusiasm toward a research problem with their faculty’s thorough understanding of research to produce scholarly solutions that will improve their organizations, campuses, and communities. Furthermore, because each organization should have a medical director, CBEMS scholars should have access to an in-house collaborator with an advanced

medical license who is able to provide expertise on clinically-gearred projects. As CBEMS-related research becomes widespread, organizations may even attract more research-minded students, faculty advisors, and medical directors, thereby allowing initial research efforts to pave a path for future work.

Inter-agency collaboration provides great opportunities to identify and approach large-scale initiatives and projects that affect a wider population of CBEMS providers, such as evaluating mass-casualty incidents during campus events. Multiple organizations working together may also take advantage of shared funding, resources, data, and knowledge, as well as a consolidation of manpower. Such inter-agency collaboration could especially benefit neighboring organizations that are similar in geography, demography, student population size, and state or regional protocols.

JCEMS & NCEMSf: Forging a Partnership

On its 25th anniversary, NCEMSf formed a partnership with *The Journal of Collegiate EMS* (JCEMS) to promote CBEMS scholarship and to spark immediate and sustainable progress in this young, growing field of research. JCEMS will provide an open access, peer-reviewed journal edited by a board of established leaders, clinicians, and research scholars, with the goal of supporting evidence-based practice and strengthening the voice of the CBEMS community. The JCEMS Editorial Board will maintain editorial autonomy while NCEMSf – an established and enduring institution – will provide the journal with networking, administrative, and financial support.

The rigorous standards demanded by the JCEMS peer-review process and ethical guidelines place JCEMS in line with the most respected academic journals. Peer review demands scholarly accountability through stringent evaluation, which facilitates impactful, professional collaboration and increases credibility. Peer review is accomplished by independent reviewers – diligently selected by the JCEMS Editorial Board – who serve as leaders and scholars in their fields, who practice at the top of their advanced degrees, and whose specialties align with the scope of each reviewed article. In addition to a rigorous peer review process, JCEMS freely provides all of its content online. As an open access journal, JCEMS provides a consolidated resource from which providers and

affiliated professionals may seek current, evidence-based information to help them improve their organizations and, ultimately, patient outcomes.

In addition to providing a forum for CBEMS providers to publish, JCEMS seeks to make research more accessible to developing scholars. In collaboration with NCEMSF, JCEMS will help identify mentors who can help guide CBEMS providers and organizations in the development of research projects and the production of publishable work. By identifying mentors, JCEMS and NCEMSF will help individual organizations join in the effort to mount research as a pillar of the broader CBEMS community. Since its inception in 1993, NCEMSF has demonstrated to the EMS community that CBEMS organizations can provide emergency care of the highest quality. Now, it is time to establish a CBEMS scholarship-base worthy of the same respect.

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Dr. Michael Guttenberg – in Memoriam

Dr. Michael Guttenberg – an EMS physician, 9/11 responder, and dedicated advocate of collegiate EMS – passed away on October 17, 2017.

Michael W. Dailey, MD, FACEP, FAEMS & Daniel I. Steinberg, MD, FHM, FACP

Dr. Michael (Mike) G. Guttenberg gave a lecture at several conferences of the National Collegiate EMS Foundation (NCEMSF) entitled “9/11/01 Looking Back...Planning for the Future.” Mike knew more about the intricacies and long-term hazards of responding to the attacks at the World Trade Center than most – as the FDNY EMS Physician Fellow, he responded to the attacks and was on scene when the towers collapsed. He supported recovery efforts and remained as long as there was hope for rescues. On October 17, 2017, Mike paid the ultimate price for his service and dedication when he died at the age of 50 of complications associated with his work as an EMS physician at the World Trade Center.

Roots in Collegiate EMS

Mike was a leader in collegiate EMS who never forgot his roots. While at Brandeis University between 1985 and 1989, Mike rose to the position of Director of Brandeis Emergency Medical Corps (BEMCo). His tenure was a time of great development at BEMCo, which included updating its protocols, enhancing its reputation within Brandeis and the Waltham, Massachusetts community,

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increasing recruitment, and laying the groundwork for updating BEMCo’s response vehicle. As a student, Mike’s mentorship skills and generosity of spirit were well developed, as he coached dozens of BEMCo members to a high level of competency. He encouraged students to augment their on-campus experience by seeking part-time or summer jobs with ambulance companies outside Boston and in New York City, leveraging his own stellar reputation at the places he worked to help get his BEMCo members hired.

“As a student, Mike’s mentorship skills and spirit of generosity were well developed.”

Pursuit of Excellence in Emergency Care

Mike’s journey in EMS began with the Youth Squad at the Commack Volunteer Ambulance Corps (CVAC) at the age of 16. He remained involved with CVAC for the next 34 years, serving as youth squad president, crew chief, Chief of the Department and ultimately the Medical Director. During the early 1990s, Mike worked as a paramedic in New York City. He worked the 42F ambulance out of Mary Immaculate Hospital, as well as the BLS unit out of Jamaica Hospital. He loved to work Tour 1, which ran from midnight to 8 a.m., because it was the perfect combination of less-trafficked streets and plenty of action. Approachable, easy to be around, and interested in others, Mike related exceptionally well to the wide range of personalities found in NYC EMS. During this time, he acquired more mentees who he would guide for years on the streets of NYC. They also sought his guidance about career decisions, such as how to transition

from EMT to paramedic and whether or not to embark on the path to medical school.

After working as a paramedic, Mike decided to move further into medicine and become a physician. Following medical school at New York College of Osteopathic Medicine. Mike did his emergency medicine residency at the Methodist Hospital in Brooklyn, where he won a resident scholarship and served as chief resident. After residency, he was selected for the FDNY EMS Fellowship, one of the most selective in the country.

Remaining involved in EMS programs Mike went on to hold several management roles in emergency medicine. Ultimately, Mike worked for Northwell Health as medical director of clinical preparedness and director of the Center for Emergency Medical Services (CEMS). He was awarded the Physician of Excellence award by the Westchester County Regional EMS Council in 2008 and the Suffolk County Regional EMS Council in 2014 – possibly the first time any physician has won this award in more than one region.

Mike's commitment to NCEMSF was ongoing, as he was an enthusiastically anticipated speaker at the annual conference nearly every year while he was healthy. For his dedication, he was awarded NCEMSF's George J. Koenig, Jr. DO Service Award in 2014. He was also recognized by his physician peers with the Lifetime Achievement Award by the Northwell Health Emergency Medicine Service Line in March 2016 and the Advancing Emergency Care Award from the NYS American College of Emergency Physicians in 2014

Commitment & Perseverance

Mike developed pancreatic cancer at the age of 46, despite a healthy lifestyle and no prior risk factors. His diagnosis is attributed to Ground Zero illness - the health fallout experienced by many first responders and volunteers. Even after his diagnosis, Mike continued to work actively when he was able, staying involved in EMS for four years with a terminal diagnosis. Even after he started hospice, Mike was on his laptop firing off emails to members of CEMS –reassigning projects and upcoming presentations he would no longer be able to give.

In a statement released by Northwell, Dr. John D'Angelo, the Chief of Emergency Medicine and Mike's boss, said: "Dr. Guttenberg has been a leader in hospitals and emergency medical services organizations across

New York State. Above all, he was a dedicated physician, a leader in the emergency medicine field, and a mentor to many. We are thankful to have known Mike as a friend and a colleague. He committed his life to the service of others, setting a high bar for performance, even in the most difficult of situations."¹

Gatherings after Mike's passing were filled with both former and active NYC EMTs and paramedics who all told surprisingly similar stories of how generous and giving Mike was with his time and advice, and the many lessons he taught them. They cried and laughed, telling stories of their days in the street and the respect they had for Mike.

On a personal level, one of the co-authors (MWD) had the honor and opportunity to say goodbye to Mike the week before he died, discussing the legacy he was leaving behind and what we could all accomplish in his name. In particular, Mike was hoping that we could continue his work on EMS provider safety, focusing on the ever-present danger that exists with interfacility transfers of psychiatric patients. Having seen several EMS providers and patients suffer, he had been working on protocols and procedures that would allow for a safe transport without sacrificing the self-determination or independence of the patients. His love of EMS and professionalism came through right to the end, as with a weak voice he spoke passionately about the need to protect our brothers and sisters in EMS.

We want you to remember Mike as the guy who strived for excellence, but also battled when things got hard or when circumstances outside of his control presented themselves. He didn't put his head down, he didn't give up – instead, Mike always bolstered up the courage needed to push forward. It was truly an honor to know Michael Guttenberg and he will be missed.

§

At Mike's request, a memorial fund has been established to benefit paramedics with aspirations to attend medical school. Please mail your donation to: Northwell Health Foundation, 2000 Marcus Ave., New Hyde Park, NY 11042. In the memo section of the check, please indicate that the gift is in memory of Michael Guttenberg.

Acknowledgments

Thank you to John D'Angelo, MD for his support on this article.

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You Can Learn a Lot from a Pair of Sneakers: Reconsidering Professionalism in Collegiate EMS

To be treated like professionals, collegiate EMS providers need to display professionalism in their attitude and appearance.

Howard E. Huth, III, BA, EMT-P, CIC

Sneakers. Nike sneakers, I think, to be specific. The Lieutenant on Duty at Five Quad Volunteer Ambulance Service (FQVAS or Five Quad) on the State University of New York at Albany (SUNY Albany) campus sent me home because of a pair of sneakers. On my first shift in EMS, I was sent home. After being practically overwhelmed with excitement for days, anxiously awaiting my first chance to actually ride on an ambulance as part of a crew, I was declared unfit for duty and sent home. All because I wore white sneakers with my EMS uniform polo and navy blue EMS pants. I wore my sneakers because my sneakers were so much more comfortable than the heavy black boots that I was supposed to wear and I didn't think that any patient would care. After all, I was going to save their life so who cares what shoes I wore while I did so?

Howard E. Huth, III, BA, EMT-P, CIC is the Director of the SUNY Cobleskill Paramedic Program and a member of the NYS DOH Bureau of EMS Regional Faculty. Howard got his start in EMS on the State University of New York at Albany campus in 1996 with Five Quad Volunteer Ambulance Service, later serving as UAlbany's first EMS Liaison. In his twenty-plus year career in EMS, Howard has provided patient care in rural, suburban and urban environments, held leadership roles in various volunteer and career EMS agencies and has served on numerous state and regional educational committees. A Life Member of Western Turnpike Rescue Squad in Guilderland, New York, Howard remains active in the field as a paramedic with the Albany County Sheriff's Office EMS Division while constantly encouraging the development of professional, ethical and compassionate EMS providers.

My First Lesson in EMS

Little did I know that on that day, Lieutenant Jordan Arnold would deliver my first lesson in EMS – if you want to be treated like a professional, you need to act like a professional – which includes a professional appearance. Jordan probably doesn't even remember the exchange from over two decades ago, but I'll never forget it. He was firm in his conviction but also took the time to explain to a "newbie" why it was so important to be professional. In a sense, he was my first EMS educator because he made the effort to mentor me instead of simply disciplining me. I was upset, angry, heartbroken, and disappointed in myself. However, from then on, I remembered to wear a neat and clean uniform that epitomized professionalism. I took pride in being a professional and I learned a valuable lesson that day.

As an aside, Lieutenant Jordan Arnold did pretty well for himself after his collegiate EMS days at SUNY Albany. Jordan went on to get his J.D. and currently works with K2 Intelligence, where he serves as a senior managing director in the New York and Los Angeles offices, and as head of the firm's Private Client Services practice. He leads complex engagements on behalf of high-profile and high-net-worth individuals, family offices and their advisors, private and public entities, financial services, and law firms. Not a bad person from whom to learn a lesson about professionalism and ethics!

Professionalism in Collegiate EMS

Collegiate EMS is such a special and valuable subset of EMS. While many agencies suffer from burn-out and

low-staffing, collegiate EMS agencies thrive from a pool of energetic, driven, and community-oriented individuals who are eager to learn and serve. Having said this, collegiate EMS has its own burdens, too. It may forever be seen as, “a bunch of kids playing on an ambulance,” regardless of their extensive training or the fact that they hold the same state and national certifications as other EMS agency providers. Despite the challenges facing a young adult trying to figure out how to delicately balance school, work, a social life, and EMS, I still think that collegiate EMS is a wonderful and worthwhile investment with many valuable lessons.

Having said this, one of the largest issues facing collegiate EMS, and EMS as a whole, is an actual or perceived lack of professionalism and ethical behavior. Our perception by the public we serve, allied health, and public safety professionals is at times embarrassing. For example, consider how EMS providers dress. If you’ve ever attended a large EMS conference, you have seen the vendor tables filled with EMS-style garments. You may have also seen them on social media platforms as ads. They all seem to depict EMS providers as heroes or as god-like warriors. Some say things like, “We rush in when your time has run out,” and have an enormous Star of Life with flames and ribbons adorning it on the back. Others say things like, “Feel Safe & Sleep with an EMT,” or “Real Women Love EMTs.” I thought I had seen it all until I saw, at a recent major conference, a pair of EMS yoga pants with a big pink Star of Life on the hip and “EMT” down one leg in six-inch letters. I nearly lost it, standing right there among my fellow “professionals.” The lines were 3-4 people deep at the table, most of them raving about how cool the items looked. I completely understand, and support, the underlying pride for our profession, but some of these garments are absurd and only degrade us in the eyes of the true professionals.

Let me ask you something. Have you ever seen a surgeon mowing his lawn in a full set of scrubs, wearing his surgical cap and face mask? Have you ever seen an off-duty police officer put on her uniform and then walk through the mall with her friends? Perhaps you’ve seen a designer license plate, denoting that the driver



is a hardworking administrative assistant who is integral to her office’s success? Have you ever gone to your physician’s office only to have the physician walk into your exam room wearing a t-shirt and shorts? No. No. No. No. Of course you haven’t. Because that would be ridiculous and unprofessional. So, I ask you, why do we think it’s appropriate to walk around in public in our uniforms or in unprofessional shirts from the conference vendors or social media ads? It’s even worse when I spot someone in a bar with a company t-shirt on. If we want to be treated like professionals, we need to act like professionals. It’s understandable to wear a company, non-uniform t-shirt every now and then that commemorates a specific event but we need to think seriously about how we present ourselves and our profession to the public and our patients.

Changing the Culture

A few years ago, as our campus EMS Advisor, I counseled a member of our collegiate EMS agency because he was constantly seen in full uniform, walking the campus and attending classes. When I first mentioned it, he said that he had a shift that night and didn’t want to have to go back to his dorm room to change clothes, but we both knew he wore it to show off that he was an EMT. I felt horrible talking to him about it, because he was doing it

out of pride. He loved that he was an EMT and he lived and breathed for our agency. However, he didn't realize that by wearing the uniform in public, when he wasn't actively on duty, he was sending a message to the general public that he was ready to respond to an emergency – which he was not. He also didn't realize that when he was standing in line at the campus eatery with his friends and using inappropriate language, people who heard it perceived him as an unprofessional representation of our EMS agency. He was flying our colors because he was proud of both himself and our agency. However, he didn't ponder what the public perception was going to be. When I spoke with him about it privately, he looked like someone had just told him that (spoiler alert) Santa Claus doesn't exist. I felt horrible but I knew that this lesson was an important one and that if I took the time to deliver it right, he would learn like I did and go on to teach others to be professional and ethical. I was so proud of him when he soon changed his pattern of behavior and eventually embarked on a career in the military. The next time I saw him, he remarked to me that the lesson we shared translated to his next career seamlessly and that he continued to take great pride in his professional appearance. However, he now completely understood that dressing professionally also carried an obligation to act professionally. He now only wears his uniform when allowed by the military and ensures that both his uniform and behavior are professional.

So, the next time you reach for that “Hero” t-shirt when you're headed to the mall or to a party, or the next time you consider “sharing” a link to an ad that promotes a less-than-professional garment, plastered with the Star of Life, I urge you to think of my 1996 Nikes and to make the ethical choice to support professionalism in our profession. After all, volunteer or paid, we are all capable of being professionals and the public and our patients deserve nothing less.

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Tackling Barriers to Seeking Emergency Care:

The Campaign for a Medical Amnesty Policy at Washington University in St. Louis

To encourage care-seeking behavior, collegiate EMS leaders spearheaded the development and implementation of a medical amnesty policy.

Suhas Gondi, BA

Many leaders of collegiate emergency medical services (EMS) would agree that medical amnesty policies save lives. While empirical proof is elusive due to the complexity of this topic and the numerous variables involved, our experience teaches us that they make our campus communities safer. These policies, which protect students who call for help in medical emergencies involving alcohol and/or drugs, are intended to encourage care-seeking in situations where students may hesitate to call EMS out of fear of punitive action from university administration related to the possession or consumption of alcohol or drugs. While student health and safety are of the utmost priority and concern, colleges often face dilemmas when considering amnesty policies, weighing the risk to students against concerns about university image, liability, and changes in student behavior.

In a national survey cited by the National Institute on Alcohol Abuse and Alcoholism in its factsheet¹ on college drinking, almost 60 percent of college students ages 18–22 drank alcohol in the past month, and almost 2 out of 3 of them engaged in binge drinking during that same timeframe.² It is well-established that college students all over the nation are exposed to and engage in dangerous levels of alcohol consumption. Unfortunately,

it is inevitable that sometimes these behaviors can lead to serious illness, injury, and even death. Luckily, collegiate EMS groups are equipped to respond to, stabilize, and if necessary, transport students who are at risk of severe alcohol- or drug-induced damage to a healthcare facility for proper treatment. However, this can only be done if a call is made.

One night when I was a freshman (at Washington University in St. Louis), I received a phone call from a friend whose roommate had become unresponsive. Off-duty at the time, I told him to call the Emergency Support Team (EST), the on-campus collegiate EMS squad. He hesitated. “But what if he gets in trouble for drinking?” Only after a concerted effort to persuade him did he call EST. Repeated interactions like this one confirmed to me that the fear of consequences was a barrier to seeking help. Alarmed, I engaged with fellow EST members and leaders and began working for a change. My hope is that our experience will be informative for other collegiate EMS groups and schools interested in pushing for and adopting a medical amnesty policy. I also hope to demonstrate that collegiate EMS leaders are well-situated in the campus ecosystem to spearhead medical amnesty initiatives.”

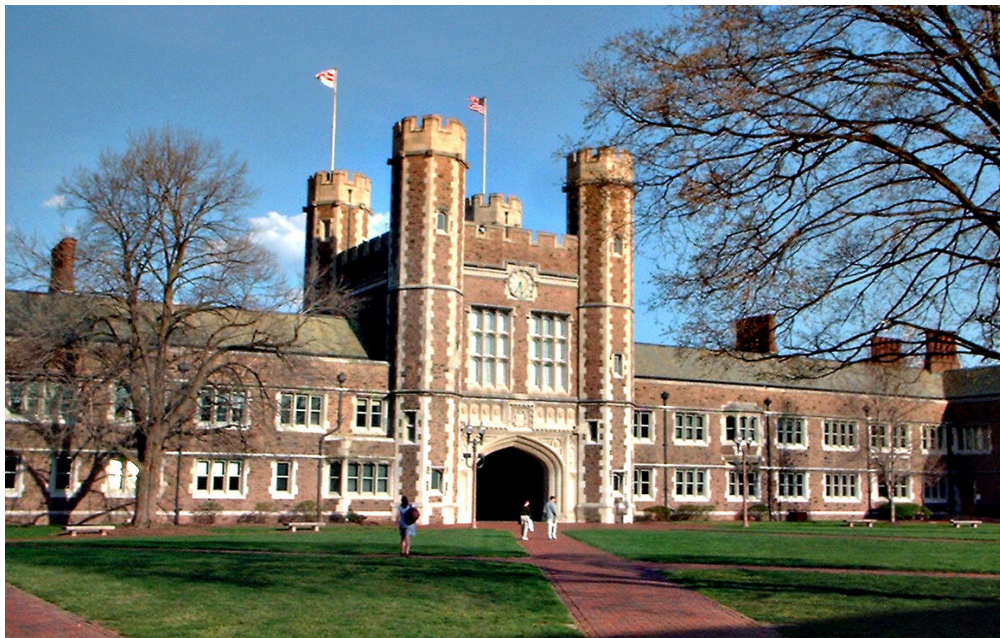
Suhas Gondi, BA is a first-year medical student at Harvard Medical School. He graduated from Washington University in St. Louis in May 2017 with a bachelor’s degree in neuroscience. He served as President of the Washington University Emergency Support Team from April 2016 to April 2017.

Greek Life, and others. As such, collegiate EMS leaders can act as intermediaries among all these distinct groups, brokering the discussions, compromises, and concessions that are needed to reach consensus and to coordinate implementation efforts across stakeholders.

The Campaign

Prior to May 2015, the existing University practices for handling a situation where EST is called for a student due to alcohol use were unclear to many individuals including: myself, fellow EST members, the student body, and even some staff members. Each situation was handled on a case-by-case basis, resulting in significant variability and confusion among students. Usually, the follow-up for a first-time incident involved meeting with a residential college director and/or a counselor in Student Health Services. For repeat instances, the practices varied significantly and no clearly defined policy was ever made available to me or my peers. Over the course of this article, I will describe that our efforts not only helped shape a new policy but also helped to clarify and standardize current practices.

The initial and most crucial step was finding a supportive member of the university administration: EST's medical director and the head of our student health services. He recounted historical campaigns to push for medical amnesty at Washington University, and he explained that prior attempts often failed due to past administrators harboring significant concerns about university image or convictions that possible consequences are irrelevant to students' decisions to call help. Further, our medical director helped identify 1) the university officials who had to be convinced if a policy were to be considered, ranging from the judicial administrator to the coordinator for alcohol and drug use to the head of student affairs, and 2) a forum that would be appropriate to make the case for medical amnesty. The forum he recommended was the recently chartered campus-wide Health and Wellness Committee, which was charged



Brookings Hall at Washington University in St. Louis

with promoting the health, safety, and well-being of students and staff across the university and included representatives from all the relevant stakeholders, including the police department, student health services, the office of residential life, Greek life, the student body, and top decision-makers.

Armed with the benefit of hindsight, I combed through research about medical amnesty policies, reached out to patients, friends, and fellow EST members to collect student narratives, and worked with other passionate advocates to launch a school-wide survey to gauge what fraction of the student body had hesitated to call for help in medical emergencies involving alcohol. According to the survey – undertaken for the purposes of internal policy development – almost 40% of students reported having not called EST out of fear of possible repercussions, a deeply troubling statistic, even after accounting for the survey's selection bias. I compiled all the information we gathered into a presentation to the Health and Wellness Committee, with the goal of convincing its members that this is a significant issue that must be addressed.

In the presentation, which set the groundwork for efforts that would transpire over the next two years, I described the results of the survey, recounted relevant student narratives, and discussed the medical ramifications of delays in calling for help (eg, further deterioration of mental state, increased risk of injury, etc.). I also discussed why the problem exists on such a widespread

scale: students often hear from friends or floormates about students who had EST called to them due to severe intoxication and had to meet with either a residential college director or a counselor from student health services in the days following the incident. While these meetings were not punitive, the perception among the student body was that these students were “getting in trouble.” This made it clear to administrators that a significant dimension to this problem had to do with messaging and transparency as opposed to procedures and protocols. Students can be quick to assume and administrators had failed to adequately communicate that these follow-up meetings were almost exclusively educative, not punitive, and rooted in a culture of support, not of punishment. Only very rarely were students issued judicial sanctions, and only in cases of egregious behavior, such as physical assault or extensive property damage, or repeat offenses.

Comparing our university to our peer schools was a particularly impactful part of the presentation. I used a reference document compiled by Students for Sensible Drug Policy (SSDP), a national organization, to help research medical amnesty policies at colleges around the country. Last updated in 2013, the reference document reported that over 240 schools had some sort of amnesty policy and more than half of those policies offered protection for incidents involving drugs in addition to those involving alcohol (data available upon request from corresponding author). Drawing from their database as well as my own research to corroborate and cross-reference, I produced a summative analysis of amnesty policies at schools that Washington University considers its peers (eg, Cornell, Duke, Harvard). At the time, over two-thirds of our peer schools had some kind of publicly available medical amnesty policy. To many administrators in the room, this was a surprising figure, a much greater number perhaps than when medical amnesty had last been considered at Washington University.

The final substantive element of the presentation was a case study of Cornell University, based on a 2006 publication by Lewis and Marchell³ detailing the passage of their medical amnesty policy and its effects. Their policy, which they branded as the “Good Samaritan” policy, was enacted in 2002. The authors reported that, in the four years after rollout, alcohol-related calls for EMS increased, although alcohol abuse rates remained relatively constant. This increase in care-seeking behavior validated

the goal of their policy, as did reported survey results indicating that students were less likely to report “fear of getting an intoxicated student in trouble” as a barrier to calling for help after the enactment of the Good Samaritan policy. Showing this data played a significant role in bringing stakeholders on-board. Without hard evidence from the literature, it would have been much more difficult to demonstrate the efficacy of a medical amnesty approach. Lewis and Marchell³ also included a list of recommendations for other schools interested in tackling the same problem. Their suggestions, reproduced in Table 1, served as an effective framework for mapping out our own course. In concluding the presentation, I posited that problems of perception are fixable and that a medical amnesty policy was a key element of that fix.

Table 1. Lewis & Marchell’s Recommendations to Develop a Medical Amnesty Policy³

1. Establish a formal protocol or policy.
2. Determine to whom amnesty will apply.
3. Determine which violations will be covered.
4. Determine jurisdiction.
5. Develop psycho-educational interventions.
6. Determine exceptions.
7. Market the protocol or policy.
8. Measure the impact.

Policy Development

This first presentation opened the door to a long series of further presentations in different forums, meetings with key administrators and students, new subcommittees and task forces forming and dissolving, and continual feedback and refinement of our suggested approach. In each meeting, we balanced the risk to student safety with the need to hold students accountable for their actions. Key choices were discussed, sometimes debated, and eventually consensus was reached on the following

policy items:

Scope of Protection

We determined whether the protection would apply to incidents involving alcohol only or illicit drugs as well. While my fellow EST members and I, understanding that the highest medical risk comes from situations involving both alcohol and drugs, pushed for the inclusion of protection for drugs, administrators felt they could not comfortably provide that level of flexibility around strict university policies. We acquiesced because we did not want the question of drug protection to derail the entire process, and decided that alcohol was a significant first step that could be built upon with the future potential inclusion of drugs.

Nature of Protection

We decided that the university could extend protection from University disciplinary action, in the form of judicial or student conduct sanctions for violations of alcohol policies, to students who call for help and for the patients for whom help is called in emergencies involving alcohol.

Follow-up to Incidents

We debated what types of follow-up are appropriate and how to mitigate them from creating a disincentive to call for help. We agreed that educational follow-up and counseling, meant to support the student and prevent future incidents, was part of the responsibility of a university, and that these should continue but be more clearly branded as completely non-punitive both during these meetings and in messaging to the wider community. We agreed that students repeatedly involved in these incidents would face additional consequences but would also receive additional support (eg, a referral for substance abuse counseling).

Exceptions to Protection

We decided that students who cause physical harm, engage in sexual assault or violence, property damage, distribution of drugs, hazing, or other criminal activity should be exempted from protection against sanctions. While the policy does cover minors, separate University policy requires that parents be notified of any medical attention a minor received on campus, including EST.

Application of Protection to Organizations

We discussed whether organizations should receive amnesty in addition to individuals. Because incidents in Greek Life houses were among the most common and troubling cases, due to both excessive drinking and fear of sanctions against the fraternity hosting a party in which a student requires medical attention, we agreed that both individuals and organizations should receive amnesty for seeking help under the protocol. Organizations referenced in this section include Greek Life groups, student groups, sports teams, and other similar groups.

Application of Protection to Off-Campus Incidents

Due to the presence of dangerous levels of alcohol consumption both on campus and in the off-campus apartments surrounding campus, we decided that the protocol should apply both on and off campus, although we noted that EST does not respond off-campus and that the University could not protect students from action by local law enforcement.

Name and Classification of Policy

We debated what to name the policy, an important decision because the impact of medical amnesty on encouraging students to call for help depends largely on effective messaging. In order to call something an official University “policy” at Washington University, it requires a long, protracted process that we decided would unnecessarily delay implementation. Instead, we opted to call it a “protocol” instead, which would allow for the same level of protection and messaging while greatly expediting the process. After surveying names of policies at other institutions, we settled on the Medical Amnesty and Active Bystander Protocol. The addition of “Active Bystander” was meant to encourage positive care-seeking behavior on the part of bystanders during a potential emergency. We avoided using “Good Samaritan” as many other schools do because that moniker can be perceived as having religious connotations.

§

It is important to note that the development of this policy fits into a broader strategy for campus safety around alcohol use, and the Health and Wellness Committee devoted resources to studying and improving the availabili-

ty of counselors and other resources to support students.

I wrote the first draft of the protocol using Georgetown University's Medical Amnesty and Good Samaritan Policy (which is no longer publicly available since it was added to their Code of Student Conduct⁴) because its provisions and language seemed most to match the decisions we had made. Starting from another institution's policy as a foundation facilitated the process by giving us a structure in which to codify our own priorities and practices. After several rounds of revisions, legal consultations from University counsel, and departmental approval from several offices, Washington University announced its Medical Amnesty and Active Bystander Protocol⁵, effective May 11, 2015.

Implementation

While I have focused on the development and passage of medical amnesty in this piece, just as important is the rollout of a policy once it has been instituted, particularly the messaging and awareness campaigns that accompany and follow the initial announcement. It is critical to use multiple channels (eg, email, mail, posters, fliers, tabling, residential programming, etc.) and reach out to both incoming freshmen as well as current students who have been at the school at a time when it did not have medical amnesty. Ensuring that the student body understands the policy, and the protections it offers, is the only way to combat the perception that calling for help in a medical emergency could lead to administrative consequences. I believe that Washington University struggled with, and is still struggling, to achieve this goal. In the semesters after the Medical Amnesty and Active Bystander Protocol was announced, students often reported being confused about what the policy means and a perception of "fake amnesty" emerged in some social circles due to several factors that are not entirely clear. Inconsistent translation of the protocol into changes in disciplinary practices, particularly in Greek Life, almost surely contributed. For instance, for quite some time after the protocol was implemented, some Greek Life groups were still put on social probation after EST was called during a party.

In retrospect, I wish EST and the relevant staff members had 1) been more active, more standardized, and clearer in our messaging to the student body, and 2) ensured that the protocol would be operationalized consistently across all sectors of campus. With time, these

missteps are being rectified through increased awareness efforts and regular review and oversight of University practices, but they will likely delay any positive impact the protocol may have. It is too early to collect enough data to perform a robust statistical analysis of the effects of medical amnesty on care-seeking behavior, although I expect a thorough retrospective analysis will be conducted over the next few years. This analysis should include 1) reviewing call data to determine if the number of calls for intoxicated patients increased at a statistically significant level while controlling for temporal variation and changes in the size of the student body and 2) periodic assessments of student awareness of and attitudes about the protocol. Before graduating, I passed the onus for this work on to younger members of EST to ensure continuity.

Paving the Path

Given how crucial learning from other schools was for us, I hope some of the hundreds of universities that still do not have medical amnesty policies can learn from our experience as they navigate this path for themselves. National organizations, such as Students for Sensible Drug Policy and the National Collegiate EMS Foundation, should consider creating a consultancy arm that can help agencies design and push for policies at their institutions.

While it was a long and arduous process, spearheading the campaign for medical amnesty was a highlight of my collegiate EMS experience. Pending quantitative evidence, I am hopeful that our protocol will make a difference. Even if one student is more likely to call for help in a life-threatening situation, then all my efforts will have been worthwhile.

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Drug-Facilitated Sexual Assault:

Implications for Collegiate-Based Emergency Medical Services

Lauren N. Gorstein, BA, EMT-B & Ralph J. Riviello, MD, FACEP, MS

ABSTRACT

Sexual assault is a pervasive public health issue on college campuses in the United States. Given that perpetrators of sexual violence often use alcohol and other drugs to generate vulnerability among victims through severe intoxication, victims may interact with collegiate-based emergency medical services personnel to receive medical care. It is crucial that collegiate first responders understand the dynamics of sexual violence and recognize the various health risks among patients who have experienced drug-facilitated sexual assault. Therefore, the purposes of this article are to review drug-facilitated sexual assault in the college environment, examine the health effects of drugs and alcohol in facilitating sexual violence, and discuss proper response and treatment guidelines for collegiate first responders.

KEYWORDS: sexual assault, drug-facilitated sexual assault, alcohol, collegiate-based emergency medical services, first responders, prehospital care

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The Centers for Disease Control and Prevention identifies sexual assault as a serious public health issue affecting millions of men and women in the United States.¹ *Sexual assault* refers to a range of sexual acts or behaviors that occur without the explicit consent of the recipient, including the unwanted fondling or sexual touching of an individual, attempted rape, coercion or forcing of an individual to perform sexual acts, or

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the unwanted penetration of an individual's body.² *Rape* is a legal term defined by the F.B.I. as "the penetration, no matter how slight, of the vagina or anus, with any body part or object, or oral penetration by a sex organ of another person, without the consent of the victim."²

While some perpetrators physically force or threaten victims to engage in sexual activity (ie, *forcible sexual assault*), increasing awareness is evolving around the use of drugs and/or alcohol as another means to facilitate sexual violence.³⁻¹⁰ Previous literature refers to this type of sexual assault using the terms *incapacitated sexual assault*⁶, *drug-enabled sexual assault*⁷, and *drug-facilitated sexual assault*⁸. In this review, the term *drug-facilitated sexual assault* (DFSA) is used to refer to any act of sexual violence committed against someone who is, voluntarily or involuntarily, under the influence of one or more disinhibiting substances. DFSA is described using two categories: (1) *Proactive* DFSA: the covert or forcible administration of a disinhibiting or incapacitating substance to

Learning Objectives

Understand the role of drugs & alcohol in sexual violence.

Examine the health risks of drug-facilitated sexual assault.

Discuss response and treatment guidelines for collegiate first responders.

Identify areas for future research, education, and training for collegiate first responders.

an individual by an assailant for the purpose of sexual assault, and (2) *Opportunistic* DFSA: the act of taking advantage of an individual who is profoundly intoxicated to the point of near or actual unconsciousness by voluntary ingestion of sufficient amounts of drugs or alcohol.¹¹ In both instances, perpetrators exploit the vulnerability of an individual, generated through the disinhibiting effects of drugs and alcohol, to enact sexual violence.

There is evidence that approximately 1 in 5 women^{12,13} and 1 in 16 men¹² have been sexually assaulted while in college. Numerous studies have shown that drug or alcohol-related sexual assaults on college campuses are more frequent than forcible sexual assaults.⁷⁻¹⁰ Given that the use of drugs and alcohol in DFSA is meant to generate vulnerability among individuals through severe intoxication, individuals on college campuses who have experienced DFSA may interact with collegiate-based emergency medical services (CBEMS) personnel to receive medical care.

While no studies have examined the intersection between CBEMS and DFSA, some studies describe the response of CBEMS and other emergency medical services (EMS) organizations to alcohol-related emergencies on college campuses. Carey et al¹⁴ found that alcohol intoxication was responsible for approximately 1 out of every 6 campus-based ambulance runs at a private four-year residential university in the northeastern United States in 2005-2006. Additionally, Rosen et al¹⁵ reported that more than twice the number of students were transported to an emergency department for alcohol intoxication following the introduction of a CBEMS agency at a small liberal arts college in the northeastern United States in 2009. Although the study was limited in scale,

the authors noted that the presence of CBEMS may promote a culture on college campuses that is conducive to increased reporting and care-seeking behavior. Since sexual assaults frequently involve the voluntary consumption of alcohol,^{6,16-21} CBEMS providers may be likely to interact with patients who have experienced DFSA.

CBEMS providers have a unique role in responding to on-campus DFSA-related calls: student first responders have the ability to provide initial peer-to-peer support and to establish a strong foundation in the chain of medical care. Thus, it is crucial that collegiate first responders understand the dynamics of sexual violence and recognize the various health risks among patients who have experienced DFSA.

Key Points

Sexual assault refers to a range of sexual acts or behaviors that occur without the explicit consent of the individual.

Drug-facilitated sexual assault (DFSA) refers to any act of sexual violence committed against someone who is, voluntarily or involuntarily, under the influence of one or more disinhibiting substances.

Collegiate first responders should be equipped to assess and treat patients of possible DFSA on college campuses.

Clinical Presentation

Presentation of a Sexually Assaulted Patient

Sexually assault patients may present in a variety of ways. Especially for a possible DFSA, the initial dispatch may not come through for a chief complaint of sexual assault. Other chief complaints may be intoxication, anxiety, altered mental status, or unconsciousness. Many patients may choose not to disclose sexual assault; for example, patients may fear being blamed by others or may blame themselves for the assault. Patients may also not remember the events throughout the night, or patients may not explicitly identify their experience as sexual assault. However, providers should be aware of signs and symptoms indicative of DFSA nonetheless (Table 1).²² For these reasons, CBEMS providers must provide treatment with an unparalleled level of respect while treating any

Table 1. Signs that a patient may have experienced DFSA.²²

Altered mental status
Apparent or reported memory loss
Impaired speech or coordination
Physical injuries without explanation, particularly in genital region
Apparent intoxication out of proportion to amount of alcohol consumption reported
Absent or rearranged clothing (eg, inside out or not the patient's own clothing)
Reported out-of-body experience

immediate life-threatening injuries.

Presentation Based on Substance(s) Ingested

With possible DFSA patients, presentations may vary depending on the substance(s) ingested. There is a common perception that DFSA is committed by proactive perpetrators who covertly “spike drinks” with fast-acting, colorless, and odorless sedatives such as flunitrazepam (also known as Rohypnol) or gamma hydroxybutyrate (GHB). However, research¹⁷⁻²¹ examining toxicological results from cases of suspected DFSA typically reveals that “drink-spiking” is fairly uncommon. Research suggests that DFSA is more opportunistic rather than proactively perpetrated. Voluntary consumption of illicit substances, and alcohol in particular, more frequently precedes sexual assault than does the involuntary consumption of flunitrazepam, GHB, or related substances. While recognizing the link between alcohol and DFSA, it is important to emphasize that the voluntary consumption of drugs and/or alcohol does not in any way reduce the culpability of the perpetrator in committing sexual assault, nor does it reduce the potential victimization experiences of the individual. Instead, these findings demonstrate that perpetrators actively exploit opportunities of vulnerability (generated through incapacitation via drugs and/or alcohol) to enact sexual violence. These findings also underscore how important it is that CBEMS providers refrain from blaming the patient for the assault, and provide non-judgmental treatment.

Providers should also be aware that alcohol can serve as a vehicle for the involuntary administration of

other drugs, such as GHB or flunitrazepam. These drugs are known to induce anterograde amnesia, leaving the patient with little or no memories of the assault.²³ Overall, the use of GHB or flunitrazepam is quite uncommon,^{17,19-21} but patients who ingest these substances may acutely present with altered mental status, unconsciousness, nausea, vomiting, or respiratory depression. A provider's index of suspicion for proactive DFSA should increase if a patient is showing signs and symptoms inconsistent with reported substances or reported amount of substances ingested (eg, the patient reports having one beer over an hour yet is drifting in and out of consciousness).

Ingesting or co-ingesting other substances may be dangerous or lethal, especially given that signs and symptoms vary depending on the substances ingested (Table 2).²⁴ CBEMS providers should be aware of possible respiratory arrest or the need for respiratory support when large amounts (eg, relative to patient weight, sex, and tolerance) of sedative/hypnotics are consumed alone or in combination with other sedative/hypnotics or opioids. Medical control should be contacted for guidance regarding patients with respiratory distress or depression.

Presentation of Physical Trauma

Many sexually assaulted patients do not sustain obvious physical injuries.³⁵ However, the absence of physical injury does not rule out the possibility of sexual assault. Injuries depend on patient-specific and assault-specific factors, such as the degree of force involved. Additionally, the detection of minor injuries may be dependent on

Table 2. Acute effects of common toxidromes²⁴

Toxidrome	Examples	Actions	Signs & Symptoms	
Anticholinergics	<ul style="list-style-type: none"> • Benadryl • Scopolamine • Visine • Atropine 	Inhibit parasympathetic activity by blocking the binding of the neurotransmitter acetylcholine.	<ul style="list-style-type: none"> • Blurred vision • Dilated pupils • Memory Loss • Psychosis • Decreased bowel sounds 	<ul style="list-style-type: none"> • Dry Skin • Hypertension • Hyperthermia • Seizures • Coma
Hallucinogens	<ul style="list-style-type: none"> • LSD • PCP 	Cause hallucinations and subjective changes in thoughts, emotion, and consciousness.	<ul style="list-style-type: none"> • Hallucinations • Disorientation • Anxiety • Seizures 	<ul style="list-style-type: none"> • Hypertension • Tachycardia • Tachypnea
Opiates	<ul style="list-style-type: none"> • Heroin • Morphine • Oxycodone • Hydrocodone • Codeine • Fentanyl 	Attach to and activate opioid receptors to inhibit the transmission of pain signals.	<ul style="list-style-type: none"> • Hypoventilation or respiratory arrest • Pinpoint pupils • Hypotension 	<ul style="list-style-type: none"> • Reduced expression of pain • Bradycardia • Sedation or coma
Sedative/Hypnotics	<ul style="list-style-type: none"> • Ethanol • GHB • Xanax • Klonopin • Valium • Rohypnol 	Depress central nervous system, slowing normal brain function.	<ul style="list-style-type: none"> • Vomiting • Confusion • Slow/irregular breathing • Loss of fine motor coordination 	<ul style="list-style-type: none"> • Slurred Speech • Delayed pupillary response • Bradycardia • Hypotension
Sympathomimetics	<ul style="list-style-type: none"> • Amphetamines • Adderall • Vyvanse • Ephedrine • Pseudoephedrine 	Mimic the effects of sympathetic nervous system activation.	<ul style="list-style-type: none"> • Hypertension • Tachycardia • Dilated pupils • Agitation • Paranoia • Seizures 	<ul style="list-style-type: none"> • Excitability/high energy • Hyperthermia • Diaphoresis • Hyperactive bowel sounds

provider training and experience. Studies report that the incidence of non-genital, physical injuries ranges from 23-85%.²⁶ Such injuries may include soft tissue injuries, such as abrasions involving the head, face, neck, and extremities. Other injuries may be due to blunt force trauma, and may produce contusions, leading to swelling, tenderness, pain, discoloration, and/or lacerations.

Presentation of Psychological Trauma

Sexual assault is a traumatic experience. It is therefore important for EMS providers to understand that patients may respond to a traumatic event in a variety of ways. Denial, shock, anger, sadness, shame, and anxiety

are all common responses among individuals who experience trauma.²⁷ Cultural differences may also influence responses to a traumatic event.²⁸ It is not uncommon for individuals who experience sexual violence to have memory impairments initially after the assault.²⁹ Difficulty in recalling the events leading up to or during the assault may be due to the patient’s traumatic experience or the drugs or alcohol consumed. However, providers should recognize that memory impairment may also be a sign or symptom of a traumatic brain injury.



Guidelines for Treatment

The guidelines presented in this section are consistent with the recommendations issued by the Forensic Medicine Section of the American College of Emergency Physicians.³⁰ Always consult medical direction and local protocols.

Treatment of Life Threats

For CBEMS providers, the treatment priorities for a patient following DFSA are essentially the same for any other patient, such that all efforts should be made to preserve the patient's confidentiality and identity. Treatment includes ensuring the patient's physical safety and evaluating, treating, and managing potentially life-threatening injuries to the patient's airway, breathing, and circulation. In most cases, an examination of the patient's geni-

tal area is not indicated and should not be performed. It is important for CBEMS to provide the patient with empathic care and to avoid asking detailed questions about the assault. Most details of the assault are not needed to provide effective care of the patient and may cross the line into a law enforcement function. Multiple accounts of the events, even with minor variations, may damage the patient's perceived credibility at trial. Therefore, the provider should only obtain enough information to ensure that no life-threatening injuries exist.

Communicating with a DFSA Patient

When treating a patient who has been sexually assaulted, all efforts should be made by CBEMS and other medical providers to provide opportunities to give back power and control to the patient. Patients who have had sexual violence perpetrated against them may feel a loss of power and control over their bodies. Therefore, provid-

Table 3. Examples of appropriate statements to say to a DFSA patient.

I want to let you know that [CBEMS agency] is a confidential resource. Whatever you tell me about what happened, I will only tell to medical providers directly involved in your care.

It is your choice if you would like to report this to law enforcement.

† You can agree to or refuse any medical treatment we provide.

It's not uncommon for you to have gaps in your memory right now. If memory comes back, it is possible it will not be in the order of occurrence.

I am sorry this happened to you.

What happened is not your fault.

I believe you.

I know this must be difficult.

We are going to do everything we can to help you.

I can see you are upset. We want to do whatever we can do to help.

You are not alone.

We are here for you.

† Provided the patient can legally accept or refuse medical treatment based on current condition (ie, alert and oriented to person, place, time, etc.).

Table 4. The DOs and DON'Ts of EMS Management of DFSA Patients

DO	DON'T
Be empathic.	Victim-blame; judge.
Give back power and control.	Use words like “alleged,” “reported,” or “possible.”
Use the patient’s own language.	Do not try to determine if a sexual assault occurred or not.
Use open-ended questions, except for specific questions to rule out serious or life-threatening injuries.	Ask specific details about the assault.
<p>Ask specific questions to rule out potentially serious or life-threatening injuries:</p> <ul style="list-style-type: none"> • Are you bleeding or having any pain? • Do you have chest pain? • Are you having difficulty breathing or shortness of breath? • Did you lose consciousness? • Are you having any abdominal pain? • Are you having any weakness, numbness, tingling, or headache? • Were you physically injured in any way? • Were you strangled? 	Contaminate/disturb areas of potential forensic evidence including debris or fluids.
If patient needs to void, collect it in a clean container.	Examine genital/perineal region.
Save any cloths or tissues used by the patient to wipe the genital area.	
Save any clothes worn during the assault or immediately after.	
Place any potential evidence in paper bags and give to ED staff.	
Transport the patient to an appropriate facility (i.e., SANE program, trauma center).	

ing even small opportunities, such as asking the patient if the crew may take their blood pressure, may help the patient regain feelings of control.

All questions asked of the patient should be open-ended, non-judgmental, and non-victim blaming. Open-ended questions allow for a full, meaningful an-

swer using the patient’s own knowledge and/or feelings, as opposed to closed-ended questions that allow for a single-word or short answer. When phrasing questions, CBEMS providers should avoid using judgmental or accusatory phrases, such as “Is this what you were wearing?” or “Why did you walk alone?” In their efforts to remain

non-judgmental and non-accusatory, CBEMS providers may want to make efforts to “neutralize” various standard medical questions. For example, the question “How much did you have to drink tonight?” may seem accusatory to a possible DFSA patient. Instead, providers may mitigate the possible accusatory nature of the question by saying, “To ensure your medical safety, we would like to ask you a few questions. Do you remember how much you had to drink tonight?” Additionally, when speaking about the assault, CBEMS providers should refer to the incident using the patient’s own words. For example, if the patient states, “I was assaulted,” refer to the incident as an assault. If the patient states, “I feel like I was violated,” an appropriate question may be, “Do you remember if this injury was present before you were violated?” The use of the patient’s language demonstrates to the patient that the provider is attentive to their concerns and aids in establishing trust and rapport. Table 3 lists other examples of appropriate statements to use when assessing a possible DFSA patient.

Transportation to an Appropriate Facility

The patient should be transported to the most appropriate facility based on their presentation and medical needs. At a minimum, the facility should have sexual assault nurse examiner (SANE) services and, if there are serious injuries present, a trauma center may be indicated. Jurisdictions should have protocols in place to determine which hospitals can accommodate the needs of the DFSA patient. The CBEMS agency should also have protocols in place that designate which hospitals have specialized services to meet the needs of their patients (ie, SANE team, trauma center, burn center and crisis center).

Documentation

While CBEMS providers’ main roles are to treat any immediate life-threatening injuries and to establish a strong initial link in the chain of medical care, thorough documentation is vital. CBEMS providers should not attempt to determine if a sexual assault has in fact occurred. It is important for CBEMS providers to accept the patient’s statements as facts and to use direct quotations when recording any statements made by the patient. This documentation is especially crucial if the patient is critically injured or *in extremis*, because any statements uttered by the patient to a CBEMS provider may be the only time

these statements are made. Such statements are considered excited utterances and are therefore admissible in court. When documenting, CBEMS providers should also avoid using terms like “alleged,” “reported,” or “possible” when describing the chief complaint of rape or sexual assault.

It is also critical for CBEMS providers to document all signs and symptoms of the patient in detail. These records will not only assist advanced providers in the continuity of care but may serve as a source of evidence for possible DFSA. Given that drugs such as GHB and flunitrazepam have fast metabolizing rates, the patient care report documenting these signs and symptoms may serve as the only evidence of DFSA if the patient does not undergo testing within the drug detection window.

Refusal of Care

At times, the patient may want to refuse treatment and transport. In most cases, the patient has the right to accept or refuse any or all medical treatments. Patients who have experienced DFSA are capable of refusing care when they appear clinically sober. This presentation means that the patient is awake, alert, and oriented to person, place and time, has vital signs within normal limits, passes a brief neurological examination, and understands their medical rights and options. The patient should be able to reiterate to the CBEMS provider what they were told about their options and alternatives to care. Based on jurisdictional protocols, medical control may have to be contacted for CBEMS to be released from the scene if the patient refuses.

Evidence Preservation

One other concern of CBEMS should be the preservation of potential forensic evidence. This preservation should not be done at the expense of other treatment priorities. If possible, the patient should be encouraged to refrain from voiding until transported to the emergency department (ED). If the patient needs to void prior to transport, however, their urine should be collected in a clean container and turned over to the ED staff. If any tissue or toilet paper was used by the patient to wipe the genitals, these items should also be placed in a paper bag and also turned over to the ED staff. The patient should be encouraged to bring any clothes they wore during or

immediately after the assault as well as a clean change of clothes. If clothing has to be removed or cut, it should be transported to the ED with the patient, preferably in paper bags. If applicable, CBEMS should look to avoid cutting through any tears already present in the clothing. Lastly, gloves should be worn during the patient encounter to prevent cross-contamination or loss of evidence, and care should be taken to avoid touching any areas with possible biological evidence such as debris, stains, or bodily fluids.

Conclusions

DFSA is a pervasive public health problem on college campuses. Collegiate EMS responders must be aware of this issue and be equipped with the proper training and knowledge to respond. Many survivors of sexual violence do not report or seek help out of fear of being blamed for the assault and/or not being believed. It is estimated that approximately 90% of individuals who experience sexual assault on college campuses do not report their assault.³¹ In some cases, CBEMS responders may be the first people with whom the patient interacts with after an assault. Establishing a strong patient-provider connection that is built on trust and compassion, and that is focused on addressing the patient's immediate needs and concerns, is imperative to ensuring the strongest continuity of care.

CBEMS organizations have a duty to better serve their campus communities. Therefore, agencies should look to connect with on-campus and off-campus sexual assault services to learn more about nearby resources as well as how CBEMS providers can properly direct patients to these organizations. CBEMS agencies may also choose to be representative members of the regional Sexual Assault Resource and Response Team (SARRT) to help with policy and protocol development. Lastly, CBEMS organizations may consider collaborating with sexual assault advocates and SANE programs to hold trainings and expand knowledge about sexual violence.

Currently, there are no studies examining the intersection between CBEMS providers and sexual assault response. Future research exploring this intersection is vital to understanding the role of EMS in responding to sexual assault. Assessing current attitudes and knowledge among EMS providers – especially CBEMS providers – on sexual assault may help advise future education and

training on this topic. Additionally, assessing the barriers for sexually assaulted patients to receive medical care may warrant future research. As a potential initial point of contact for patients who experience sexual assault, positive experiences with first responders may profoundly influence their decisions for seeking further medical treatment.

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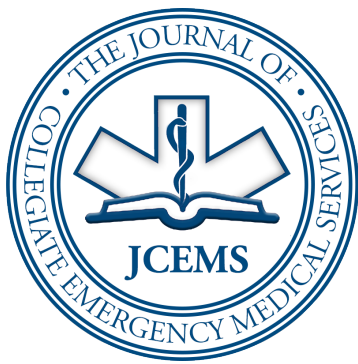
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