How Do Emergency Department Physicians Rate Their Orthopaedic On-Call Coverage?

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INTRODUCTION

A recent survey of the American Academy of Orthopaedic Surgeons found 70% of respondents reported orthopaedic on-call coverage is a “problem” in their community.1 Interestingly, only 40% of respondents felt call is a “personal obligation” and 70% of surgeons who took call said they did so because “hospital bylaws mandate it.”1 The survey found that the three top reasons for physicians not wanting to take call were: 1) disruption of lifestyle and family life; 2) inadequate compensation; and 3) disruption of elective practice.

Orthopaedic injuries account for a substantial proportion (41%) of emergency department (ED) visits.2 Three of the top 10 most expensive diseases in the United States are orthopaedic ED conditions, with fractures accounting for $21 billion, sprains and strains $7.1 billion, and open wounds $4.5 billion.3 According to the Centers for Disease Control and Prevention, ED use continues to increase with over 100 million visits per year.2

Multiple authors have looked at reasons for transfer of patients with orthopaedic injuries from community level EDs to Level I trauma centers.3–7 Several studies have found non-medical reasons such as time of day/night and insurance status as factors that correlate with whether patients are transferred.3–6 One prospective evaluation found that when an orthopaedist was available at the transferring hospital, only 42% of patients were actually evaluated by that person before transfer to a Level I facility.8 The aim of this study is to understand from the ED physicians’ perspective what the extent of the orthopaedic on-call coverage “crisis” is and what they perceive as the main reasons for it.

METHODS

After Institutional Review Board approval, written questionnaires consisting of 25 items were sent to the ED directors at 39 of the 41 hospitals in New Hampshire and Vermont. The only EDs excluded were the two Level I trauma centers. The ED directors were contacted by e-mail before delivery of the survey to request their participation. All surveys were anonymous and return envelopes were discarded to maintain anonymity.
Survey Design
The instrument consisted of questions asking about frequency and adequacy of orthopaedic on-call coverage, reasons for patient transfers, and included three patient scenarios to see how often patients would be transferred assuming there was orthopaedic coverage.

Data Analysis
Incomplete questionnaires were not included in the analysis. All statistical analyses were conducted using R Version 2.11.1 for Windows, Vienna, Austria.2 We summarized frequencies of the responses as percentages. Tests for equality of proportions were made using the chi-square approximation to the binomial. Results with a P-value of < 0.05 were considered statistically significant.

RESULTS
Of the 39 EDs surveyed, there were 31 responses (See Supplemental Digital Content 1, http://links.lww.com/BOT/A34). Because the directors were allowed to distribute up to four additional copies of the survey to their physician staff, the exact response rate may not be determined definitively. Based on the demographics of the questionnaires returned, however, it appears that very few copies were distributed, suggesting the observed response rate may be close to 79%.

Sixty-four percent of respondents believed that their daytime orthopaedic on-call coverage was adequate, but this number dropped to 52% for nights and 48% for weekends. Over half of respondents (55%) claimed that their on-call orthopaedist was reluctant to evaluate a patient in the ED when requested to do so. Only 29% of respondents said their orthopaedist always came to the ED to evaluate a patient when asked. Fifty-two percent of respondents said it was often the case that a patient’s care could have been improved if they had been evaluated by their orthopaedist. When asked in an open-ended question why their orthopaedist was reluctant to evaluate a patient, responses included such factors as: “time, reimbursement” as well as “fatigue, hard to come in from home when settled down” and “they have been overworked and tired.” Other responses were less kind with one respondent stating: “they, as well as others have lost any sense of duty or professional responsibility to care for patients outside of normal business hours.”

When comparing orthopaedic coverage with general surgery “in terms of responsiveness,” 72.5% said it was “about the same,” but 24% said it was “much worse” and only 3.5% saying it was “much better.” The rating of general surgery to orthopaedics as “much better” was statistically significant (P = 0.039). When asked if the ED physician arranged for transfer of a patient without contacting their on-call orthopaedist, 64% said they did so at least some of the time. Table 1 summarizes the responses as to which factors the emergency room physicians said would make their orthopaedist more or less likely to evaluate a patient when asked to do so.

Three scenarios were presented to see how often the patients would require transfer. They are as follows.

| Scenario 1 | transfer of a diabetic female with a hip fracture. |
| Scenario 2 | A 30-year-old pedestrian is struck by a car. On arrival in your ED, injuries identified include an open book pelvic fracture (5-cm pubic diastasis). The patient is currently normotensive with adequate oxygenation. Assuming you have orthopaedic coverage, this patient would be transferred (Fig. 2). |
| Scenario 3 | A 55-year-old uninsured man sustained an alcoholic blackout. He awoke with severe left calf pain. You have diagnosed him with an isolated acute compartment syndrome of his lower leg. Assuming you have orthopaedic coverage, this patient would be transferred (Fig. 3). |

DISCUSSION
Our findings support the work of previous authors who have shown problems with the state of surgical subspecialist ED coverage.7–12 Less than two thirds of ED physicians in our survey felt their weekday orthopaedic coverage was adequate and less than half felt coverage was adequate on weekends. Only 29% of ED physicians said their orthopaedist always evaluates a patient when asked to do so. Each time an on-call orthopaedist fails to respond to a request for emergency room coverage, this patient would be transferred (Fig. 1).

![FIGURE 1. Scenario 1: transfer of a diabetic female with a hip fracture.](image-url)
patient evaluation, it is potentially a violation of the Emergency Medical Transfer and Active Labor Act (EMTALA) punishable by a fine to the hospital and the individual physician of $50,000.

Although this is a regional survey, the findings likely represent a more general trend in the United States. The Orthopaedic Trauma Association (OTA) presidential addresses in 2006 by Michael Bosse, MD, 2007 by Jeff Anglen, MD, and 2008 by J. Tracy Watson, MD, all dealt with the nationwide problem concerning the lack of orthopaedic ED coverage. In his 2007 address entitled “Last Call,” Dr Anglen discussed the OTA’s “Standard of Professionalism,” which “states that every orthopaedic surgeon should acknowledge a duty to his or her community and should make a positive contribution to solving this problem, including, when necessary and appropriate based on local circumstances, taking call.”

Recent data seem to indicate the profession has not responded to the OTA’s recommendation. A prospective study by Crichlow et al evaluated patients transferred to a Level I trauma center. They found that 16.5% of transfers were “completely inappropriate” and only 39% of the time was a patient actually evaluated by an orthopaedist at the referring center, assuming an orthopaedist was available.

Our findings are supported by prior studies that have found non-medical reasons for patient transfers. Fifty-six percent of respondents reported their on-call physician would be less likely to evaluate a patient in the middle of the night. Thirty-two percent of respondents said fear of liability would make their on-call physician less likely to evaluate a patient and 11% said lack of insurance is a factor. Ideally, factors such as time of day, liability concerns, and insurance status should have no impact on whether an ED patient is evaluated by the on-call specialist.

Lack of adequate on-call coverage is not just an academic concern but has an impact on patient care. Over half (52%) of respondents said it has been the case that a patient’s care could have been improved if the on-call orthopaedist had come in when requested to evaluate a patient. One might ask, as J. Tracy Watson, MD, did during his 2008 OTA presidential address, “how did we get into such a bad state of affairs? How did we evolve from an emergency room call, which demonstrated a social and moral responsibility to a situation where the physicians are ridiculed by their peers if they have not figured out a way to permanently avoid these responsibilities?”

The answer is multifactorial, but a 2008 survey of American Academy of Orthopaedic Surgeons members found the three biggest “barriers to call” as 1) disruption of lifestyle and family life; 2) inadequate compensation; and 3) disruption of elective practice. The solution(s) to the current problem will likely have to address all three of these factors.

Recently the American Academy of Orthopaedic Surgeons published guidelines for how to deal with the issue of ED call. The first recommendation is to change the reimbursement structure for ED coverage. The American Academy of Orthopaedic Surgeons has suggested hospitals establish a set stipend or pay agreed-on rates for ED call. A second recommendation is to allow a tax deduction or financial offset for uncompensated emergency room care. Such a plan is contained in a bill sponsored by Representative Mary Bono Mack entitled “Mitigating the impact of uncompensated service and time act of 2009” (HR 1678). This bill is currently in the first step of the legislative process. A third suggestion is found in the “Health care and safety net enhancement act of 2009” (HR 1998), which proposes that physicians providing EMTALA-related services should be considered Federal employees and protected from liability under the Public Health Service Act. This bill is also in the first step of the legislative process. Another recommendation is that hospitals improve resources for trauma cases. This has already been done at many Level I and II trauma centers, which designate a “trauma room” in the operating room to handle urgent and emergent cases. Another suggestion is the creation of “orthopaedic hospitalists” who would be hired by hospitals to provide full-time ED coverage. These are all viable options, some of which are already in practice.

This survey has some weaknesses. First, the survey was performed in two rural states in northern New England so the results may not fully represent the rest of the country. Like the rest of the United States, however, there is substantial variation in the size and capabilities of EDs in these two states ranging from Level I trauma centers to single-room EDs with one physician or physician assistant providing coverage and no orthopaedist available. Furthermore, the number of orthopaedists in these states approximates the national average of 7.1 per 100,000 population. A second weakness is that we do not know the exact response rate, but based on the responder demographics, it seems almost all surveys were completed by the ED directors and very few, if any, copies were distributed.

This survey adds to the increasing literature demonstrating the current problems with orthopaedic emergency on-call.
coverage. The main question is how the profession will respond. Punitive measures such as those in the EMTALA law do not seem to be the answer, because physicians merely find ways to get around them or avoid call altogether. Measures such as those suggested by the American Academy of Orthopaedic Surgeons, which reward the desired outcome, will likely prove more successful. Appropriate compensation and a reduction in liability are key components to foster change.

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Invited Commentary

Emergency Room Coverage of Orthopaedic Injuries: A Public Relations Problem

This study points to the fact that we as orthopaedic surgeons have a major public relations problem on our hands. The authors of this survey clearly demonstrate that there is a perception that orthopaedic surgeons are truly not interested in providing care for injured patients.

According to this study, our colleagues in emergency medicine feel that we are not willing to care for patients on “off time.” Our colleagues perceive that our community has “lost any sense of duty or professional responsibility to care for patients outside of normal business hours.” Unfortunately, there may be some truth to this sentiment as demonstrated by the American Academy of Orthopaedic Surgeons’ study in which only 40% of respondents felt that call was a personal obligation of becoming an orthopaedic surgeon.1 Although providing care for patients with emergent orthopaedic injuries is a pivotal responsibility of orthopaedic surgeons across the nation, one must also recognize that the obligation to organize coverage for the emergency department also lies with hospitals and public officials.

In his 2008 Orthopaedic Trauma Association presidential address, Dr. Watson posed the question “When the iron men are all retired...who will pin my hip?”2 We fear that if we as orthopaedic surgeons do not demonstrate a commitment to the care of the orthopaedic patient in the emergency department, the answer to Dr. Watson’s question may in fact become the general surgeon rather than the orthopaedic surgeon. As this current study demonstrates, only 29% of respondents replied that their orthopaedic colleagues always came to the emergency department to evaluate a patient when requested. Moreover, 24% of the emergency department physician respondents felt that orthopaedic coverage of orthopaedic trauma is much worse than general surgery coverage of emergent general surgical issues. It is critical that we ask ourselves this question: at what point will the emergency department physicians just stop calling for help and look to others?

These sentiments of the emergency physicians have not gone unnoticed by others. For example, on a policy level, general surgeons are currently in the process of creating fellowships that will potentially train surgeons to become “acute care” or “emergency” surgeons and obtain privileges to place external fixators, reduce joints, and conduct other procedures that are currently

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performed by orthopaedic surgeons. Taking this argument to the extreme, one must ponder the scenario in which general surgeons perform intramedullary nailing of femurs and hemiarthroplasties on many of these patients who initially present in the emergency department. As Dr. Canale stated in an editorial in *AAOS Now*, in earlier times, general surgeons relinquished the treatment of many injuries now managed by the orthopaedic community, including hip fractures.\(^3\) We must ask ourselves, is the tide shifting?\(^3\)

Considering a survey of this nature, perhaps orthopaedists across the United States should be cautious not to distance themselves from fracture care. It is conceivable that simple fractures might ultimately be treated by the primary care physician in the emergency department or the clinic, leaving only the more complex fractures for orthopaedists.

Our argument here is not to advocate permanent coverage of emergency rooms across the nation, but rather to step back and take measure of our role in the care of patients in the emergency department based on the findings of this article. Undoubtedly, taking emergency department call has many drawbacks. To name only a few, these obstacles include disruption of lifestyle and family life, inadequate compensation with increased exposure to liability, and disruption of one’s elective practice.

However, it is also very important to realize that the responsibility to provide orthopaedic coverage for a hospital’s emergency department is not only with the physician, but also with the hospital as well as public leaders. Therefore, it is important for the hospitals as well as public officials to work with physicians who provide emergency department coverage to assure that some of these “burdens of call” are removed. Some solutions for this crisis have been proposed in the American Association of Orthopaedic Surgeons/Orthopaedic Trauma Association’s on-call position statement.\(^4\)

First, hospitals should not make surgeons financially responsible for the care of emergency patients. Hospitals should provide surgeons with a call stipend or instead agree to pay for uncompensated emergency department care. Additionally, hospitals should provide surgeons who are giving emergency care the resources needed to provide this service. This would include providing a designated operating room for emergencies as well as ancillary support in the form of staff and other resources that in turn would allow for the delivery of efficient and quality care.

Finally, lawmakers are also an important partner in assuring orthopaedic coverage is provided for emergency departments. Legislation should provide assistance in the form of liability protection for physicians who are providing emergency care as mandated by the hospital and both the state and federal government. Additionally, the US government should fund and support trauma networks that would establish guidelines for inter-institutional transfers, provide equitable reimbursement for orthopaedic trauma care, and assure the availability of appropriate outpatient care after hospitalization for orthopaedic trauma.\(^5\) Establishment of such networks will improve patient outcomes and access to orthopaedic care for their musculoskeletal injury while decreasing costs.

In conclusion, orthopaedic surgeons are the most appropriate provider of acute musculoskeletal care, and it is critical that we embrace this fact in moving forward. As orthopaedic surgeons, it is imperative that we work with hospitals and public officials across the United States to assure that the care of patients with musculoskeletal injuries is provided in the most appropriate manner.

If we do not fix this public relations problem, others will fix it for us.

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