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Emergency Department Physical Therapist Service: A Pilot Study Examining Physician Perceptions

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ABSTRACT

Though physical therapist consultation has been described as a means of enhancing care in the Emergency Department (ED), such services are rare and often poorly understood. This pilot study utilizes qualitative methodology for the purpose of describing how one group of emergency physicians experienced with physical therapist consultation in the ED perceive these services and the challenges associated with their provision. Transcripts of interviews with 11 emergency physicians were analyzed for recurrent themes. Findings indicated that these physicians found ED physical therapist services to be of value for themselves, their patients, and the department as a whole and described specific manners in which such consultations enhanced emergency care. Implementation and maintenance of the program, however, presented various challenges. Furthermore, physicians perceived that possession of certain characteristics better prepared physical therapists for success in this practice environment. These findings may help clarify the role of the ED physical therapist and aid in communicating the potential benefits and complications associated with the delivery of such services.

INTRODUCTION

The early introduction of physical therapy (PT) services has been described as a means of enhancing care for Emergency Department (ED) patients. In this model, physical therapists are available for physician consultation and provide point-of-entry management for patients seeking emergency treatment.[1,2] The ED-based physical therapist or physiotherapist has been depicted as a practitioner who often provides intervention for patients sustaining musculoskeletal injuries and educates individuals on managing their conditions after discharge.[3-5] Additionally, these services have been shown to improve patient satisfaction and help patients better achieve follow up treatment.[5-8]

Well established ED PT programs, however, are rare. One reason for this may be the manner in which ED physical therapists function and provide care within this setting is not well understood. Understanding how such services fit within the context of ED

operations is essential for further exploring the ED PT model and ultimately determining its value. In this way, defining the inner workings of this interdisciplinary approach may result in informed decisions regarding its future implementation. An incomplete perspective, on the other hand, leaves decision makers unaware of it potential value. A similar construct is outlined in health care literature which suggests that the perceived benefits of a therapeutic intervention influence its utilization in practice.[9,10] These studies support the importance of recognizing the role of the ED based physical therapist.

For these reasons, it is advantageous to describe the views of ED physicians who have experience with physical therapist consultations. Because these practitioners are ultimately responsible for ED patient care and frequently utilize specialist consults, their perspective is essential for describing the context of ED PT and identifying any potential value the service may have.[11] Yet, little is known about how ED physicians perceive these services. Clarifying these perceptions may be useful in further exploring this unique approach to practice.

The purpose of the present study is to describe the perceptions of physicians who have first-hand experience consulting with physical therapists in one particular ED setting. A brief history of the development of this ED PT program provides some perspective about the scenario upon which this investigation is based. Physical therapists at the facility of interest had been contemplating the benefits of PT consultations in the ED and were inspired to further consider implementing such services after reading an article which described an established ED PT program in a different hospital.[2] These therapists made a site visit to the established program and consulted with therapists and administrators concerning their original development efforts. Based on this experience and their own research efforts, the therapists aspiring to develop the new program presented ED administrators and physicians with a plan for implementing ED PT services. This plan was well received and over time evolved into the full time service described in this manuscript.

Based on this background, it was determined that the views of physicians working in this ED may provide valuable insight for those interested in further understanding ED PT services and any rationale for their utilization. Therefore, the research questions which framed this qualitative investigation were: 1) How do physicians of Emergency Medicine experienced with physical therapist consultations perceive this service and what value, if any, does it provide? and 2) What challenges do these subjects perceive are associated with offering PT ED services and how may they be best addressed?

METHODS

A qualitative research design was chosen for this study because of its descriptive, interpretive and naturalistic approach to inquiry.[12] Unlike quantitative research, which has a confirmatory focus on an outcome that could be quantified, qualitative research aims at gaining a deeper understanding of the experience. Qualitative research is a methodology that is less concerned with prediction, control, and measurement and more concerned with discovery, description, and interpretation.[13] This methodology, therefore, was deemed appropriate for its potential to identify and illustrate the dominant views of interviewed Emergency Medicine Physicians.

Description of the Facility and ED PT Program

Subjects were recruited from a group of physicians working in the ED of a northern Arizona hospital. The ED in this facility was considered a trauma center equipped to handle the highest level of medical emergencies and had a capacity of 25 beds. At the time of data collection, the department had offered PT services for just over three years. The physical therapists available for consultation in this facility were employed solely for the purpose of providing ED patient management seven days per week during the majority of peak operations. Upon encountering a patient who might benefit from PT consultation, the ED physician instructed staff to notify the available physical therapist using a pager system. After receiving notification, the physical therapist completed a chart review, consulted briefly with the physician, and then proceeded with patient management as appropriate. Physical therapist consultations typically varied from between 5 to 15 patients per 8 to12 hour shift.

Sampling Methods

While the pool of subjects was largely a convenience sample of accessible individuals employed by the facility of interest, researchers also attempted to incorporate aspects of purposeful and heterogeneous sampling.[12,14,15] With respect to purposeful sampling, all potential subjects needed to have experience utilizing physical therapist consultation in the ED. However, in an attempt to seek heterogeneity in this area, subjects who both frequently and infrequently consulted ED physical therapists were recruited. Interviewing subjects with varied demographic characteristics was also a priority aimed at creating a more diverse sample. Specific strategies for systematically achieving this sample involved creating an initial target list of potential subjects that described each individual's ED PT referral patterns, gender, emergency medicine experience, and length of time employed by the hospital.[14] While researchers used this list to pursue a purposeful and heterogeneous sample, practical considerations, such as availability and consent to an interview influenced the final pool of subjects. Ultimately eleven Physicians of Emergency

Medicine with experience utilizing the consultation services of physical therapists with their patients were scheduled for interviews.

Data Collection

Interview sessions were conducted, audio-taped, and subsequently transcribed by research assistants. To encourage open and forthcoming responses, the research assistants were not physical therapists nor were they associated in any way with the hospital ED. Interviews lasted approximately 30 to 45 minutes and were based on the use of a standardized interview tool (see Appendix A). Such instruments have been cited as advantageous for focusing the interview and aiding in data analysis by making responses easier to find and compare.[15] While the tool contained specific questions, interviewers were trained to conduct interviews in a manner that promoted open ended responses, follow up questioning, and maximum elaboration. In an attempt to reduce bias, both the design of the tool and the training of the research assistants encouraged probing for negative instances[15] concerning perspectives on ED PT. In other words, in addition to asking for overall perspectives about the program, interviewers specifically questioned subjects regarding situations in which ED PT was considered inappropriate, of lesser value, or in which the implementation of the intervention produced challenges or disadvantages.

Data Analysis

Two researchers were involved in analyzing data for emergent themes. Both individuals were trained in and experienced with a variety of qualitative research methods. The researchers' characteristics enhanced the trustworthiness of the data through the concept of prolonged engagement. This consideration for data analysis is thought to provide researchers with an "epistemological privilege" when they have experience or knowledge that provides an advanced perspective regarding the data of interest.[16] Thus, the researchers' preparation methods and experiences, which are described as follows, aided in providing a unique understanding of ED PT programs. The first researcher had previously worked as a physical therapist in the ED setting and therefore had direct experience with this topic. While this background provided some advantages during analyses, it was acknowledged that this experience could also create potential biases. For this reason, the second researcher – a Certified Athletic Trainer familiar with rehabilitation settings but without ED experience – was able to provide an alternate and balancing perspective on the data. Finally, to maximize familiarity analyzing such information, both researchers previously analyzed interview data from a smaller ED PT pilot study in which subjects participated in interviews similar to those administered in the present study.

Investigators used the following processes to strive for maximum trustworthiness of results. During individual data analysis, both researchers followed a pre-determined process based in the qualitative principles of categorical indexing and content analysis.[16,17] As recommended by Mason, the first step of this process involved each investigator becoming maximally familiar with the data by taking a "literal" approach to analysis and reading all interview transcripts for basic content and face value.[16] Once adequately acquainted with transcripts, the next review involved using content analysis to establish tentative themes. This involved unitizing or "slicing" of data to create initial categories and sub-categories representing salient ideas. Previously agreed upon principles were utilized to guide the creation of these tentative themes. For example, while indexed categories were initially established with the research questions in mind, they were open to development throughout analyses and thus ultimately emergent from the data as they became evident. To maximize uniformity and a systematic approach, an electronic diagram consisting of table headings and subheadings served as a flexible template used by researchers to arrange developing themes and consolidate like ideas.[14] This approach of first identifying individual units of data and then combining related content is supported in the literature and has been described as constant comparative analysis. Finally, researchers used the concept of latent content analysis to examine the resulting themes, compare them with the written transcripts, and confirm or disconfirm these within the overall context of the narrative.[17] Because to this point in the described process researchers performed only individual analysis, the last step was to collaborate to finalize themes. This involved comparing findings for consistency and when appropriate, further consolidating related indexed categories. Instances of lesser agreement or inconsistency were identified by researchers who then further reviewed the relevant data together to arrive at a final consensus on such issues.

As some authors note, passing judgment prior to coding the data can introduce researcher bias and should be avoided.[12,15] Therefore, other methods for achieving the best possible reliability and validity of reported data included the following. During thematic development, researchers specifically reviewed data for negative case analysis in an attempt to reduce positive biases toward the utilization of ED PT.[16] While respondents were not available for follow up contact, the results were examined by the primary physical therapist staff member in the ED at this facility. This review served as a member check, as the individual who was well acquainted with the services discussed in the interviews confirmed that the reported themes seem consistent with daily experiences in the ED.[17] Finally, the analysis of data first from an individual perspective followed by investigator collaboration served as a reliability check to minimize biases from each individual's perspective.[16]

FINDINGS

Analyses revealed three clear sets of emergent themes. The first theme suggests that the service had *perceived value* for various stakeholders in the ED environment. A second salient idea was the perception that though beneficial, the novelty of this program created various *challenges*. The final theme of *personal characteristics* describes the attributes that were perceived as beneficial for physical therapists functioning within this setting.

Theme #1 – The Value of ED Physical Therapist Consultation

Value for the ED Physician

Physical therapy services provided in the ED were perceived to be of direct value for ED physicians during daily operations because they enhanced clinical practice through an expanded scope of management options. For example, one subject stated that the availability of the service enabled him *" to provide … a greater spectrum of care because (physical therapists) do things that are … beyond my scope of practice."* Doctors perceived that through the interdisciplinary combination of medical and physical therapy intervention, they could provide their patients with musculoskeletal conditions with a more comprehensive diagnosis and treatment plan than was the norm in the ED. According to one representative quote it was stated that, " *… physical therapists are particularly good at sorting out musculoskeletal problems … that we are not well trained to do."* For patients with complaints of significant pain, physicians appreciated having the option to consult physical therapists as an alternative to prescribing narcotics or other forms of analgesia. Other instances in which physicians valued having the additional option of ED PT available to them included the treatment of individuals with symptoms of vertigo or those in need of wound care.

ED physicians also envisioned physical therapists as an added resource for evaluating the mobility of potentially unsafe patients. Physical therapy consultations afforded the physicians access to expertise in recommending an appropriate assistive device and/or strategies for maximizing patient safety. Through a functional evaluation, they could also provide input on the proper discharge destination including returning home, referral to long term care, or inpatient admission. The following excerpts from physician interviews help illustrate the perceived utility of such assessments.

> *"One of the things that I think is really valuable to have down in the emergency department is the gait assessments that we do for the elderly patients. Often that's one of the big determinants of whether or not somebody's safe and able to go home or not. And I think that we just get a much more valuable assessment if it's being done by the physical therapist as opposed to either the physicians or the tech, or the nurses in the emergency department doing it."*

> *"I want physical therapy to come … assess … safety … I want to know that their gait is stable and they are able to take care of themselves."*

Value for the ED Patient

The expertise delivered by physical therapists was also viewed as benefitting ED patients. It was widely perceived that providing specific musculoskeletal diagnoses and additional interventions improved the quality of patient care. Physical therapist services were thought to offer a more comprehensive management approach at the point of entry into the health care system. This was in contrast to the traditional approach of providing initial medical intervention and then having the patient receive external follow- up physical therapy care at a later date. Some physicians viewed such early intervention as having the potential to speed recovery and/or prevent complications. Subjects described PT services as valuable for ED patients because they perceived that they got "*patients plugged into the system quicker," "added to the quality of the patient care,"* and *"increased our ability to provide good service."*

More specifically, physical therapists were valued for providing extensive patient education that included instruction in exercises specific to their condition or other advice for independent management. With these instructions, it was thought that patients could immediately begin making therapeutic gains and avoid behaviors that would contribute to long term problems or chronic conditions. Patients discharged with a thorough understanding of their diagnosis were thought to have greater satisfaction with their care. These interview selections further illustrate these ideas:

> *"They (physical therapists) provide in detail, instructions on various different things."*

> *"There is education that we don't provide as in-depth as a physical therapist does."; "(it increases) the patient understanding of their problems"*

> *"They (physical therapists) give lots of good information and examples of things that they can do in the future. You know, expect 'this' in the next couple of days, and as you begin to get 'this,' you can start to do 'that,' and 'these' are things that you should avoid."*

Recommendations for follow-up made by physical therapists were also viewed as beneficial within the patient's continuum of care. Physicians indicated that they often solicited advice from physical therapists regarding outpatient specialist referrals. Multiple physicians expressed that these interactions even affected referral patterns for ED patients seen during hours when physical therapists were not available for consult. Specifically, they reported referring greater numbers of patients for outpatient physical therapy.

Departmental Value of ED Physical Therapy

From a broader perspective, physical therapy services were perceived to be advantageous for the entire department. Because they believed that patients could receive specialized care and additional services as compared to traditional settings, physicians felt their facility possessed a competitive edge. The ability to provide hands on physical therapy intervention for patients with vestibular dysfunction or complications with wound healing was considered to be an advanced service not offered by other hospitals.

Departmental efficiency was thought to be affected by the presence of physical therapists. In select instances, physical therapy consults were viewed as a potential barrier to patient throughput (a concept further described in the forthcoming section on "challenges"). More commonly, however, the service was seen as something which improved productivity. Because some PT consultations resulted in therapists providing the bulk of the management, physicians and other busy ED staff could instead attend to other patients, complete administrative duties, and thus reduce overall wait times throughout the department. For example, ED physicians were quoted as perceiving that as result of the service, "*the patient flow is actually improved"* and that it "*shortens (the patients') stay in the ED" and "increases throughput tremendously"* in part because it "*frees up our techs to do other things for us, such as transport patients" and "frees up the doctor and nursing staff for more medication related issues".*

Finally, the perception that the program improved patient satisfaction served as evidence that it had departmental value. It was noted that physical therapists were able to provide more patient contact time than ED physicians could typically afford. This resulted in patients feeling as if they received personalized care and a comprehensive understanding of their problem and how to manage it. Physicians believed that these factors contributed to a better overall ED experience.

Theme #2 – Challenges Associated with Implementing or Sustaining an ED PT Program

Despite having consistently positive views of ED PT consultations, physicians acknowledged the challenges associated with implementing such services. This included the notion that there exists an "unrecognized need" for the service. Physicians strongly expressed that prior to working with physical therapists, they did not have a complete understanding of physical therapy scope of practice and therefore had difficulty envisioning the services therapists might provide in the ED setting. Upon first hearing of the program, many were skeptical of its potential for success, and they struggled with how this new service would mesh with the typical ED culture of providing all interventions within one health care visit.

Experience with the program however, seemed to improve understanding of how physical therapists could function within this environment. After utilizing physical therapist consultations for a period of time, these physicians could articulate the value of the service. Previous concerns were allayed as physical therapists became accepted members of the ED team. In fact, physicians felt that without ED PT service, their ability to provide care would be hindered. They speculated that other physicians lacking exposure to ED PT services would also have significant difficulty visualizing the value such programs may provide. These interview excerpts capture some of the perspectives which contributed to this theme:

> *"I think (that the services are) an unrecognized need. I certainly never would have sought out PT services for the department, and I'm the medical director … But now that they're here I can't imagine working in a department without them."*

> *"I myself was very skeptical when I heard that physical therapists were coming to the department. I didn't really have a good understanding of how it might aid my practice. And it has greatly aided my practice."*

Other perceived challenges were related to fiscal and administrative matters. Though none of the physicians described specific instances in which financial considerations became an issue, they envisioned that these could be problematic in attempting to

replicate this approach in other hospitals. Particular concerns included identifying the best way to charge for services rendered, the potential for profitability, and the possibility that uncovered costs would be passed on to the patient.

Another logistic concern involved the specific manner in which physical therapy consults affected departmental productivity. Though it was previously mentioned that physicians felt ED PT aided staff efficiency, some had an alternate viewpoint. The fact that physical therapists were thought to spend significant time with patients was seen as an occurrence which could occupy precious space and therefore reduce patient turnover during peak hours. Most qualified this view, however, by expressing that the additional time taken was justified considering that the therapists were providing valuable interventions and patient education. One subject, for example stated:

> *"(The service is a) double edged sword in terms of patient flow. It allows them to move from patient to patient faster, and they do a great job informing the patients about the injury. They are the experts. However, the patient and PT tie up the bed for another 30 minutes, and prevented another patient from being admitted."*

Lastly were challenges specific to the physical delivery of therapy services and staffing of ED therapists. Because patient vestibules in the ED were small and not ideal for performing PT interventions, physical space was cited as a concern. Similarly, physicians described storage of PT supplies and equipment as a common problem. With respect to staffing, physicians felt that recruiting sufficient numbers of therapists was a continual issue. Finding coverage was perceived to be especially challenging when the regular ED PT staff were out sick or on vacation. Furthermore, physicians consistently reported a desire to expand the hours of service to include evening and night shifts.

Theme #3 – ED Physical Therapist Characteristics

A final theme which persisted throughout discussions with physicians described characteristics possessed by certain ED physical therapists. These characteristics were related to both personal and professional aspects of practice and thought to be traits which could help therapists overcome some of the previously mentioned challenges. Consequently it was perceived that individuals exhibiting such behaviors could be more successful in this environment.

Physicians felt that therapists who were better able to relate to ED patients could more effectively function as part of the ED team. The caring individual with good communication skills was noted to be more efficient when working with the anxious and often angry patients that are part of the ED population. Patience and flexibility were thought to be attributes which helped ED physical therapists adapt to the unique challenges and ever-changing work pace encountered in this environment. Most physicians expressed that they desired to work with an ED physical therapist who is *"genuinely caring and easy to get along with," "flexible," or "somebody that likes people"* and *" who can work under stressful situations."* Others further expressed the differences between the ED and other settings by saying:

> *"Someone who is able to approach patients in the acute care setting, where they might be emotionally stressed (is effective) … (the ED is) very different from the outpatient setting."*

> *"Some (therapists) don't deal well with people who are acutely uncomfortable verses people who are coming to see a physiotherapist and their pain is settled down. And some of them do very, very well with acutely injured people."*

Certain clinical proficiencies were considered necessary for successful ED physical therapist practice. In general, exceptional time management and the ability to multi-task were viewed as necessary within the unstructured and unpredictable confines of the ED. They specified that in selecting an ED therapist, *"you really have to have someone who manages their time really well,"* and to be successful in this environment*, "you have to be able to multitask."* More specifically, competency addressing musculoskeletal, integumentary, and vestibular disorders was valued. Physicians expressed that they most often sought ED PT consultations for patients with musculoskeletal conditions. Therefore, it was essential that ED therapists possess expertise in this area. Furthermore, an understanding of the psychology associated with acute musculoskeletal injury was thought to result in more effective care for these individuals. ED physicians also expressed a desire to work with therapists skilled in treating benign positional vertigo and chronic skin wounds. They stated that traditional ED management for these patients typically involved prescribing symptom reducing medications and an outpatient referral. But PT diagnosis and hands-on interventions such as the Epley maneuver or the application of appropriate wound dressings had the potential to resolve problems prior to discharge from the ED or accelerate the healing process. The following interview quotes summarize these ideas:

> *"Not just (having) musculoskeletal (skills is important) but (also) balance/gait, (and) wound care. I had never thought of using PT for BPPV or vertigo, but there are definitely some PT's that are comfortable with those maneuvers."*

"The level of expertise ... has really improved our treatment of both wound care patients and orthopedic patients."

"I push for physical therapy for wound care patients … and for vertigo patients as well."

DISCUSSION OF FINDINGS

Further Reflection on the Value of ED PT

The literature supports the notion that physical therapists possess specialized expertise which may supplement present ED interventions for patients with musculoskeletal conditions.[18,19] Though non-critical musculoskeletal complaints are common reasons for an ED visit, the emergency care literature often describes musculoskeletal ED practice as an area with potential for improvement.[20-22] Research analyzing practice trends has specifically described this idea with respect to the management of acute ankle sprains, cervical strains, and low back pain.[23-25] In contrast, the literature describes physical therapists as well trained in musculoskeletal practice and as having significant baseline knowledge of musculoskeletal management principles as compared to most other medical practitioners.[18-19] Ball et al. reported how ED physical therapists put these principles into practice by more frequently providing oral instruction and encouraging early mobility than other ED practitioners in the management of acute ankle sprains. Such practice is consistent with current guidelines for managing acute musculoskeletal injuries.[4,26]

Physicians also felt physical therapists provided additional intervention options for pain control, managing vertigo, and providing wound care. Treatment of acute pain is frequently cited as a problem area in the ED,[27,28] often due to fear of over prescribing narcotic medications.[29] PT interventions such as electrical stimulation and spinal manipulation represent an additional and effective approach to acute pain management[30,31] that may reduce the need for narcotics among ED patients. The Epley Maneuver, a common PT intervention,[32] has been shown to be effective in resolving vertigo symptoms in ED patients.[33] Though no studies have considered the efficacy of PT intervention for ED patients in need of wound care, ED demographics suggest that there is also potential for further specialist involvement with this subset of individuals.[34]

Another common perspective on value for the ED physician was that physical therapists served as a resource for managing patients with questionable safety and in providing a more comprehensive interdisciplinary assessment. Enhanced management of ED patients with safety issues has been described as a needed service. One study found that typical management of elderly patients presenting to an accident and emergency department after a fall focused on treatment of injuries with minimal consideration for prevention and minimizing risk factors.[35] In contrast, physical therapist patient education such as safety awareness and mobility training has been shown to be effective in reducing falls for at-risk patients presenting to the ED.[36]

Beyond having value for themselves, physicians viewed physical therapist consultations as holding value for the ED patient. While many investigations suggest that early introduction of physical therapy service improves recovery, only one study has attempted to analyze the relationship between quantifiable ED patient outcomes and physical therapy intervention.[33,36-38] This investigation did not conclude that ED physical therapy services result in enhanced patient outcomes.[7] Though studies have found increases in perceived quality of care due to ED physical therapist intervention, more research is needed to draw conclusions regarding the influence of this service on patient recovery.[3,7,8]

The potential for additional patient education on self management provided by physical therapists, however, has promise. Kempson reported that program 94% of accident and emergency patients receiving education from a physiotherapist had a good understanding of how to manage their condition after discharge, and 99% were certain about how the injury should progress.[5] Since increasing ED patient comprehension of their condition and discharge instructions affects compliance, this may be an important way in which physical therapists can supplement present ED care.[39,40]

Finally, the program was seen as having departmental value by improving patient satisfaction and perceived care. Patient satisfaction is described as a chronic and common problem in emergency care and the literature clearly indicates that its improvement should be a priority for all ED's.[27,28] Because ED PT services have been shown to increase patient satisfaction in multiple situations, their potential for benefiting the department in this manner should not be underestimated.[3,7,8] With respect to patient flow through the department, subject perceptions were mixed. Some literature, however, has suggested decreased wait times and improved patient flow associated with ED physical therapist involvement.[41]

Addressing Challenges: Learning from the Process

Physicians perceived that within any ED there exists an "unrecognized need" for physical therapist services and ED physicians and administrators without exposure to such programs may be resistant to integrate this new service within their practice. Some

literature suggests that the general public often has a limited comprehension of physical therapist practice.[42] As acknowledged by many physicians, this lack of awareness may contribute to resistance to accept the ED PT model. The Perceived Benefits model supports this notion in describing how limited understanding of an intervention's benefits can result in resistance to utilize the approach.[9,10]

Physicians described multiple challenges related to the daily operations of ED physical therapy. Reimbursement and other financial considerations, though only discussed in general, were seen as likely difficulties. While established programs have been financially stable, variations in insurance plans and the financial structure of hospitals, departments, and physician groups greatly affect reimbursement for ED physical therapy services.[1,2] A standard system for billing and reimbursement of these services may not exist, which perhaps contributes to some of the physicians' concerns.

Physical therapy consultation was identified as having potential to positively or negatively affect ED efficiency. Because physical therapist consultation occurs in addition to the other services that the patient would normally receive, it is logical it could require a longer patient stay. However, physicians felt that any additional time was justified, since they perceived the intervention as beneficial. As described by Ball et al. additional time spent providing oral and written instructions for self management can be of benefit and may increase comprehension of and compliance with discharge instructions among ED patients. [4,39,40]

Issues associated with physical space and staffing of ED therapists should be acknowledged as possible challenges. The arrangement of ED vestibules presents obvious problems for providing interventions such as manual therapy or for storing physical therapy equipment. The "round the clock" nature of ED practice also represents a departure from the typical physical therapist's schedule. Since 99% of physical therapists work daytime hours, it is logical that many therapists are hesitant to sign on for shifts in a service such as this in which therapists must be staffed 7 days per week into evening times.[43]

Analysis of Perceived Characteristics of Successful ED Physical Therapists

ED physicians perceived that certain physical therapist characteristics allowed for greater success in this environment. Since the ED is commonly described as a fast-paced and stressful environment in which patients present with higher levels of acuity, it is understandable how strong interpersonal skills and effective time management skills would benefit ED physical therapists.[27,28,44] The frequency of non-urgent ED musculoskeletal conditions justifies the need for therapists to possess expertise in this practice area.[20] While ED demographics suggest that significant numbers of patients with vertigo visit the ED research supports the use of vestibular rehabilitation techniques for ED patients.[1,33]

Potential Practice Implications

While conclusions based on qualitative inquiry such as this of this may not be generalized outside of the contextual boundaries of the study, it is worthwhile to consider how these results could impact ED practice.[16,45] These findings suggest specific areas of expertise as well as personal characteristics that may best prepare physical therapists for ED practice. Prior to the existence of the ED PT program, the emergency physicians interviewed in this study expressed limited understanding of how a physical therapist might function in the ED. Therefore, those with aspirations of developing ED PT programs can benefit from understanding that the possible advantages of having physical therapists available for consultation in the ED are often not clear to those unfamiliar with this interdisciplinary approach. Thus program developers must clearly articulate any potential advantages when educating administrators and referral sources. The views of these physicians may also provide insight for minimizing some of the daily complications associated with ED PT practice. Timely consultation of physical therapists and a strong understanding of the reimbursement system and may minimize patient stays and lessen concerns about finances and patient flow. Finally, to avoid staffing limitations programs should train supplementary therapists to function in this environment so they may be available to replace regular staff in their absence.

LIMITATIONS

Various limitations are associated with this study. While maximally practical in this setting, recruitment of a greater number of subjects would be ideal. Although primary investigators collaborated in establishing themes, their individual beliefs, philosophies, and perspectives were a source of potential bias. Finally, triangulation of interview data with observations and analysis of documents would further enhance reliability. Though this was not possible in this investigation due to institutional restrictions, future studies could benefit from these methods.

CONCLUSION

Consultations with physical therapists may provide perceived value in the ED setting. Describing how physicians view these services more specifically outlines how these services may supplement present ED interventions and elucidates the culture associated with ED PT practice. Physicians serving as subjects in this study found value in these services for themselves, their

patients, and the department as a whole. Furthermore, various challenges associated with providing these services were identified and physical therapist characteristics which help overcome such potential problems were described. The degree to which these conclusions may be externally generalized is limited. They do however, provide a starting point for future studies investigating outcomes associated with ED physical therapy services and may guide practitioners interested in exploring this area of practice within their respective facilities.

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Appendix A
INTERVIEW TOOL

General Questions:

Based on your experiences, what are your general thoughts on the PT services in the Emergency Department?

Benefits of the Service:

How does a PT presence in the ED benefit **the patient**?

What parts of the service have been most valuable to you as **a physician**?

Would you say the service has in any way, changed the way you practice?

For what types of patients / in what situations, have you consulted PT's that you were previously unaware they might be of help?

Perceptions of the PT Profession & the Knowledge Base of Physical Therapists:

Do you have a different opinion of physical therapists' skills than you did prior to your exposure to this program?

After working with physical therapists in the E.D., are there skills that physical therapists possess of which you were previously unaware?

Based on your experiences, What are your thoughts on the diagnostic skills of physical therapists?

How effective do you think PT's are at diagnosing musculoskeletal conditions?

How effective do you think PT's are at diagnosing other conditions?

In what areas do you feel PT's are strongest / most valuable (dx's, situations)? The weakest?

What are the limitations of PT services in the ED setting?

Do you think that physicians who have not had the opportunity to work in the E.D. with physical therapists have a different perception of physical therapy? In what way?

How do you think most other emergency dept. physicians who have not had the opportunity to work in the E.D. with physical therapists, would react to the idea of such a program?

Daily Operations & Work Flow:

For what diagnoses are you most likely to use a PT consult?

Do you notice that different PT's use varying treatment approaches?

Do you notice that different physical therapists possess varying levels?

Does this affect your referrals?

Do you notice a difference among PT's of varying levels of experience?

Does it make a difference to you what PT is working that day with regard to the way you might refer patients?

Have you had any negative experiences utilizing PT services / consults? Explain.

How does a PT presence in the ED affect efficiency?

Suggestions for Change / Improvement:

What might you change about the service?

What parts of the service could be improved upon?

What might you require / request of the therapists providing services?

What qualities would you desire in a therapist providing ED services?

Service Development:

Were you initially skeptical of utilizing PT services? In what situations? Why?

In your opinion, what are the barriers to implementing PT services in the ED setting?

What advice would you give to therapists / managers who would like to implement PT services in the ED of their own hospital?

If you worked in a different hospital that did not offer physical therapy service, how might it affect your practice? Why?

If you worked in a different hospital, would you advocate for a PT consult program? How actively?

Closing Comments / Other Thoughts?