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Research Report

Leadership, Administration, Management, and Professionalism (LAMP) in Physical Therapy: A Delphi Study

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Background and Purpose. The knowledge and skills needed by physical therapists entering practice in the areas of leadership, administration, management, and professionalism (LAMP) are not known. Using the LAMP components identified by American Physical Therapy Association's Section on Administration, this study sought to define the range of LAMP content pertinent to physical therapy clinical management and to explore LAMP knowledge and skills required of physical therapists upon entry into the profession. **Subjects and Methods**. Thirty-four physical therapist managers participated in a Delphi study to (1) create a comprehensive list of defined LAMP components, (2) determine the perceived importance of each component in the management of clinical practices, and (3) identify the level of knowledge and skill for each component believed to be necessary for a new physical therapist graduate. **Results**. Respondents agreed that 178 items should be on the LAMP component list. They perceived that almost all LAMP components are important in the management of a clinical practice, and they indicated that new graduates needed moderate to extensive knowledge in 44% of them. They believed that new graduates needed no skill in 29% of the components, whereas they needed at least intermediate skill for 22% of them. Top-ranked component categories across the 3 scales (importance, knowledge, and skill) were communication, professional involvement and ethical practice, delegation and supervision, stress management, reimbursement sources, time management, and health care industry scanning. **Discussion** and **Conclusion**. This study provides a basis for further exploration of which LAMP components should be included in professional (entry-level) physical therapist curricula and which components should be learned after graduation. [Lopopolo RB, Schafer DS, Nosse NJ. Leadership, administration, management, and professionalism (LAMP) in physical therapy: a Delphi study. *Phys Ther*. 2004;84:137-150.]

Key Words: *Administration, Delphi, Leadership, Management, Physical therapy, Professionalism.*

The *Guide to Physical Therapist Practice* (2nd ed)[1] (Guide) provides what we believe is a useful framework for understanding the scope of physical therapist practice as it applies to direct patient care. In our opinion, however, the organizational context in which physical therapy is practiced receives little attention in the Guide, although we believe it is of interest to current and future physical therapist managers. Furthermore, when physical therapists consider the context in which they deliver patient care, we believe they find that they need to use knowledge and skills in administration/business management to guide their actions. But what are the appropriate knowledge and skills in administration and management, and what do all physical therapist graduates need in these areas? While the answers to these questions are currently unknown, the inclusion of administrative/management content in *A Normative Model of Physical Therapist Professional Education*,[2] which is used extensively by physical therapist educators to guide curricular development, suggests to us that some content in administration/management is important for new graduates to know.

In the Normative Model, there are 5 categories of content: direction of human resources, supervision and management of personnel, participation in financial and human resource management, participation in marketing and public relations, and use of other business strategies in physical therapy management. Although the model provides a list of behaviors expected of new graduates, it does not articulate whether these behaviors should be equally weighted as to importance, or to the level of knowledge or skill required. In addition, it is not known whether the 5 suggested content areas are the only, or most appropriate, areas that need to be addressed by physical therapist educators.

Much of what is written concerning managerial work appears in the general business and management literature. In the early 20th century, Fayol[3,4] was the first person to describe the concept of managerial work, which he did by identifying the functions managers perform. His description of managerial functions (planning, organizing, directing, and controlling) remains popular today as a framework for thinking about and teaching managerial work. Not until the early 1970s did Mintzberg[5,6] offer an alternative model of managerial roles, a model that was derived from research data. He used structured observations of 5 chief executive officers, each from a different industry, to develop a model that includes 10 managerial roles: disseminator, disturbance handler, entrepreneur, figurehead, leader, liaison, monitor, negotiator, resource allocator, and spokesperson. The roles include a variety of knowledge areas and skills that are needed for role execution.[5,6] For example, resource allocation would require knowledge of the nature of resources used and how they could be allocated in an efficient and effective manner, as well as skill in performing the actual allocation.

Adaptations of Mintzberg's 10-role model[5,6] have been used by researchers to describe the relative importance of these roles to research and development managers,[7] hospital-based middle managers,[8] and physical therapist managers and educators.[9] Over the course of these studies, 6 additional roles were used. Pavett and Lau[7] added technical expert, and

Roemer[8] added communication, financial control, interpersonal relations, operations, and strategic assessment. Table 1 illustrates the comparative findings of these 3 studies. In all 3 studies, the leadership role was found to be among the most important. However, in the studies by Roemer[8] and Schafer,[9] which were carried out in health care environments, communication and entrepreneurship were found to be among the most important roles. The communication role was not included in the study by Pavett and Lau.[7] In addition, the results of all 3 studies indicate that the role of figurehead is the least important. The technical expert category that was added by Pavett and Lau was considered least important by the participants in the studies by Roemer[8] and Schafer.[9] While these studies begin to identify the relative importance of managerial roles, it remains unclear whether Mintzberg's model is useful in gaining a comprehensive view of the managerial knowledge areas and skills needed by physical therapists as an adjunct to their clinical skills.

Recognizing the need to develop a better understanding of the business-related skills that physical therapists use, the American Physical Therapy Association's (APTA's) Section on Administration (SOA) published the Leadership, Administration, and Management Preparation (LAMP) document in early 1999.[10] The original LAMP framework was, largely, based on the Guide's 6 problem-solving elements (examination, evaluation, diagnosis, prognosis, intervention, and outcomes),[1] which served as a template for organizing a generated list of likely administrative and management content pertinent to physical therapy practice. Although the description of each Guide element[1] was modified by Kovacek et al[10] to reflect the nature of the business/organization context rather than patient care (Tab. 2), the usefulness of this model has not been investigated. The LAMP document is the first to identify the administrative and management content (referred to as "components") believed to be important in physical therapist practice regardless of clinical setting. This list of LAMP components is a mixture of content derived from management theory and areas of management knowledge and skills used by physical therapists. The components needed by a clinician when taking his or her first clinical position, however, were not identified.

In our study, we used the LAMP document[10] as a point of departure, asking the following questions: Is the list of LAMP components complete in that it encompasses all the LAMP content used by physical therapists who work as clinicians? What are the most important LAMP components for physical therapy management? What levels of knowledge and skill in each LAMP component are needed by new graduates? By answering these questions, we hope to move closer to understanding the LAMP content that is part of clinical practice and most relevant to the new physical therapist graduate.

Method

We selected the Delphi technique as the research method for this study because this survey technique is often used to obtain an informed or refined consensus from a group of experts or knowledgeable informants. This group of individuals is commonly referred to as a "panel." The typical Delphi study is characterized by anonymity, iteration with researcher-controlled feedback after each questionnaire round, and the statistical

summary of group responses after each round.[11-15] Anonymity prevents individual responses from being identified with a respondent and allows consensus to be reached among panel members without bias, inhibition, or psychological pressure from influential group members, a situation that could occur during face-to-face discussions, such as during focus group sessions. The iterative process involves successive questionnaires referred to as "rounds." Each round is followed by feedback to the panel of respondents that is controlled by the researcher. Controlled feedback informs the panel of the group's collective opinion and guides the direction of the subsequent rounds. Statistical summaries are used to attain consensus from panel input. Although there are no hard-and-fast rules to guide the design of a Delphi survey, we used the process described by Couper[11] because it fit the objectives of our study and the nature of the data we needed to gather. That is, our questions were specific and targeted rather than open-ended, and we queried informants who had relevant practical knowledge as our panel.[11,14] The rounds are described in the following sections.

Panel of Respondents

Because expertise in clinical management is difficult to identify, the panel of respondents was composed of individuals whom we believe had relevant practical knowledge of the LAMP content.[11,14] Physical therapists who were clinical managers were chosen not only for their knowledge of the breadth of the LAMP content, but also because they were involved with the development of LAMP skills for employees at all career levels. The panel represented physical therapist clinical managers who: (1) were members of APTA; (2) worked in a variety of clinical settings across the United States; (3) responded to a call for participation that was posted on the list-servs of the Administration, Acute Care, and Private Practice sections of APTA; and (4) agreed to participate in the 3 rounds of the Delphi study.

Eighty-one clinical managers initially agreed to participate in the study. Forty-four managers completed the questionnaires for the first 2 rounds, and 34 managers completed all 3 rounds. Descriptive data for the respondents were collected in the third round and are displayed in Table 3. The data indicate that the respondents were experienced physical therapists and managers who supervised workforces ranging in size from 5 to 90 people. Although there was representation from a variety of clinical practice sites on the panel, the majority of the respondents worked in a hospital or health care system. Only 2 respondents were self-employed.

Survey Procedure

The 3 rounds of the LAMP Delphi survey were conducted via the Internet. Each questionnaire was sent as an e-mail attachment along with a message that provided general information about the questionnaire, explained how data would be handled, indicated that participation served as informed consent, and assured them that their responses would remain anonymous. If the respondents had difficulty opening the e-mail attachment or sending the questionnaire to the researcher, the questionnaire was transmitted via fax or mail, depending on the

preference of the respondent. In order to maximize the response rate, a follow-up e-mail was sent to each respondent who had not responded by the deadline. The procedures used to manage the data for each round are described in the following section.

The Delphi Instrument

The instrument we developed for this study was based on the list of components identified in the original LAMP document.[10] Because the LAMP document was intended to emulate the Guide's[1] problem-solving model, we retained the element structure to group the LAMP components. The first 6 elements followed the Guide's[1] model, but the descriptions of the elements were changed as previously described (Tab. 2). For the purposes of our study, a seventh element was added to incorporate LAMP components that were not included in the 6-element model but are believed to be intrinsic to organizational and management theory.

Because we wanted to examine a list of LAMP components that was as comprehensive as possible, we expanded the list of LAMP components beyond the content included in the original LAMP document[10] to include other areas of managerial content taken from management literature. This expanded list of LAMP components was used for all 3 rounds. In an effort to increase component clarity on all 3 rounds, we added definitions for most of the LAMP components. The initial list of LAMP components and definitions was reviewed and edited by a 6-member research group that included the authors and 3 other researchers who worked on this project (and are identified in the acknowledgments) until we arrived at what we considered to be a comprehensive list of components. These 165 components were identified and placed into the 7 elements previously described. This comprehensive list of LAMP components, with definitions, was used for the round 1 questionnaire of the study.

The round 1 questionnaire was designed to determine whether the list of LAMP components and accompanying definitions was comprehensive, understandable, and mutually exclusive. The respondents were asked to review the component list and add appropriate, but omitted, components that they felt were important in their clinical practices. They also were asked to identify any components or definitions that were unclear or were included under inappropriate elements.

Data from round 1 were compiled by the lead researcher (RBL) and sent to the members of the research group who, working in pairs, reviewed assigned sections of the data for their assessment of the need for the additions or clarifications of components and definitions. The entire research team reviewed the decisions made by each research pair to determine concurrence. The resulting list of 175 LAMP components served as the basis for the round 2 questionnaire.

The second survey (round 2) had 2 main purposes. First, the respondents were once again asked to review the list of LAMP components to confirm that they believed the inclusion of components within elements was complete and appropriate and to identify components or definitions that they felt remained unclear. Second, respondents were asked to do the following: "Rate the level of importance of each LAMP component in the

management of your clinical practice, department or service." The components were scored using a 4-point Likert-type scale (1=unimportant, 2=minimally important, 3=moderately important, and 4=very important).

The data to refine the survey instrument from round 2 were again compiled by the lead researcher and sent to the research group to determine concurrence for changes to the list of LAMP components or placement of components within elements. Based on the review, the list of LAMP components was increased by 3 to 178, which served as the basis for the round 3 questionnaire.

The data on the importance of the LAMP components (round 2) were analyzed using frequencies of responses to ascertain the relative level of importance of each LAMP component in the management of a clinical practice. To facilitate further interpretation of the data, median scores were calculated for each of the 7 elements previously described. Because the 7 elements are general groupings, further partitioning of the data was required to depict what we considered meaningful differences in importance among the LAMP content areas. To accomplish this task, the components included in each element were clustered by the content areas specified in the original LAMP document.[10] In those situations in which content areas represented a heterogeneous grouping of components, further partitioning of the content area produced unambiguous categories of components. For example, human resource management, a content area, was further partitioned into 10 categories. In those situations in which the content area represented a fairly homogenous group of components, further partition was not carried out. For example, financial management, a content area, was treated as one category because we believe it represented a homogenous group of components composed of the closely related forms of budgeting and financial data management used in clinical practice. This process produced 38 categories, which are shown with their definitions in the Appendix. Median scores for each category were calculated to characterize the central tendency of the data.

In addition, the component scores within each category were averaged for the purpose of ranking their level of importance in the management of the clinical practice. Although Likert-type scales sometimes are considered ordinal scales, researchers in the social and management sciences often treat scale items with 4 or more response categories as continuous variables and use normal theory statistics including means with them.[16,17] This practice has been supported by computer simulations that have shown that data from Likert-type scales with 4 or more response categories (such as those used in this study) act in a fashion similar to interval-level data and thus may be treated as though they were interval-level data.[16]

The purposes of the final round (round 3) were to gather descriptive data on the respondents and to identify the level of knowledge and the level of skill that respondents expected a physical therapist who is beginning professional practice to possess for each of the 178 LAMP components. For round 3, respondents were asked to assume that the physical therapist was a recent graduate and a new hire who had completed the typical orientation and socialization period and was ready to assume full staff

responsibilities.

Because the possession of knowledge and the possession of skill reflect 2 different constructs, 2 four-point Likert-type scales were used for their measurement (Tab. 4). The data on the expected levels of knowledge and skill for the LAMP components were analyzed in the same manner described previously for the level of importance. Finally, the top (highest-rated) 5 and bottom (lowest-rated) 5 LAMP categories for all 3 scales (importance, knowledge, and skill) were examined to determine similarities across scales.

Results

Component List (Round 1)

Forty-four (54%) of the original 81 respondents suggested over 700 component-related changes in response to the round 1 questionnaire. Although there was repetition among the respondents' suggestions, the suggestions included a contention that some LAMP components needed to be added, moved between elements, or better defined to improve the clarity and organization of the LAMP component list. Additionally, suggestions were made to eliminate repetition of components listed under more than one element. Incorporating this input resulted in a list of 175 mutually exclusive LAMP components with definitions for the round 2 questionnaire.

Importance (Round 2)

The same 44 respondents completed the round 2 questionnaire, which was composed of the 175 LAMP components. The frequency of responses for level of importance across all LAMP components is shown in Figure 1. Out of 7,008 responses, more than half (59%) were scored 4 (ie, rated very important in the management of their clinical practice), whereas only 228 responses (3%) were rated unimportant. When the median importance scores for the 7 LAMP elements were examined, 4 of the elements were rated as very important and the other 3 were rated moderately important. When the 38 categories of importance data were ranked (Tab. 5), differences in importance among the categories became apparent. Of the 38 LAMP categories, 20 were ranked in the top 5 and were considered to be very important, whereas 10 were ranked in the bottom 5 and were considered to be of minimal or moderate importance.

Knowledge (Round 3)

Thirty-four physical therapists (42%) responded to the round 3 questionnaire. The frequency of responses for level of knowledge needed by physical therapists beginning professional practice for the 178 LAMP components of the round 3 questionnaire are displayed in Figure 2. Out of 5,849 responses, over 75% were scored either 2 (minimal knowledge) or 3 (moderate knowledge). The respondents used a score of 4 (extensive knowledge) only 10% of the time, while a score of 1 (no knowledge) was used 13% of the time. When the median knowledge scores for the 7 LAMP elements were examined, only 2 of the 7 elements had scores at the moderate level (score of 3), while the other 5 elements had scores at the

minimal level (score of 2).

When the 38 categories of knowledge data were ranked (Tab. 6), 7 of the categories were ranked in the top 5 and 9 were ranked in the bottom 5. The data indicate that most of the 5 top-ranked LAMP categories had median scores of 3 (ie, "requires moderate knowledge [a good understanding of the concept and how to use information related to it]"). Only one category, communication, had a median score of 4 (ie, "requires extensive knowledge [should have a thorough understanding of the concept and how to use information related to it]"). Those LAMP categories ranked in the bottom 5 had median scores of 2 (ie, "requires minimal knowledge [should be aware of what the concept means]").

Skill (Round 3)

Figure 3 displays the frequency of responses for the level of skill expected of a physical therapist beginning professional practice for the 178 LAMP components. Out of 5,640 responses, just under half (49%) were scored at the novice skill level (ie, that the therapist should know how to use information related to the concepts, but have minimal skill in applying it). Only 22% of the LAMP components were scored at either the intermediate or skilled level, while no skill was expected for 29% of the components. When the median skill scores for the 7 LAMP elements were examined, all elements, except outcomes, were at the novice level (score of 2). For outcomes, the median score was 1 (ie, no skill was expected).

For the skill scale, 8 of the 38 LAMP categories were ranked in the top 5 and 10 were ranked in the bottom 5 (Tab. 7). For this scale, most of the 5 top-ranked LAMP categories had median scores corresponding to the intermediate skill level (score of 3), whereas only 2 categories, communication and profession scanning (scanning of the profession), had median scores reflecting an expectation of skilled performance (score of 4). The LAMP categories ranked in the bottom 5 had median scores that were generally in the novice skill level (score of 2). When the top 5 and bottom 5 LAMP categories for all 3 scales (importance, knowledge, and skill) were examined for similarities, 7 categories appeared in the top 5 on all 3 ranked lists (Tab. 8) and 5 categories appeared in the bottom 5 on all 3 ranked lists (Tab. 9). Five of the 7 top categories were in the original LAMP intervention element.[10]

Discussion

Because the panel of respondents in the study represented a relatively experienced group of managers (Tab. 3), all of whom were APTA members, they were familiar with the content related to leadership, administration, management, and professionalism examined in this study. Thus, we believe this is why we were able to achieve a fairly comprehensive list of LAMP components that reflects the administrative/management content used in clinical practice. Organizing the data using this 7-element model allowed us to examine the differences in relative importance of the components in clinical management as well as differences in the knowledge and skill needed by a physical therapist upon entry into the profession.

For the 7 LAMP elements used in this study, the highest median scores for all 3 scales were found for intervention, followed by evaluation. This pattern indicates that the components associated with day-to-day operations within clinical environments (intervention) and making judgments based on environmental scanning (evaluation) were considered by the respondents to be of greatest importance in the management of clinical practice and were areas that required the therapist to have a good understanding of the concepts and their use when beginning clinical practice.

The data on the importance of the LAMP categories reflect a wide breadth of LAMP content used in the management of clinical practice. We found communication to be the most important category, which is in agreement with the findings of both Roemer[8] and Schafer.[9] Like Pavett and Lau,[7] Roemer,[8] and Schafer,[9] we also found that leadership in the workplace was a top-rated managerial function. However, we found many other categories to be almost as important as communication and leadership. These include having an understanding of and being able to function within the political, economic, and social environment of clinical practice. Only 3% of all responses in round 2 were scored as unimportant. Because of this level of agreement, we believe these findings, reflect the complexity and range of content used in the management of today's clinical practice. Based on these findings, a case could be made for the importance of almost all areas of LAMP content, except, perhaps, for management of multinational organizations. In this study, however, we attempted to move beyond the concept of importance in management and to explore the concepts of knowledge and skill required of the physical therapist entering clinical practice for the first time.

Because this is the first study to focus on the requisite areas of knowledge and skill in administration and management for physical therapists beginning professional practice, our findings represent rudimentary evidence for the LAMP content that new graduates need upon completion of their professional education. When viewed without regard to specific LAMP components, respondents used the "extensive knowledge" and "skilled" scores less than 10% of the time. These findings suggest that our respondents believed that few of the LAMP components need to be mastered in terms of knowledge and skill by physical therapists at the beginning of their clinical careers. Likewise, when viewed without regard to specific LAMP components, respondents used the "no knowledge" score 13% of the time and the "no skill" score nearly 30% of the time. These results suggest that there are some LAMP components that may not be necessary to include in professional education because they may not be needed in a therapist's first clinical position. In general, however, the respondents were of the opinion that the new graduate needs some (minimal to moderate) knowledge and skill (novice to intermediate level) in the majority of the LAMP categories.

When exploring specific LAMP categories, our findings suggest that physical therapists beginning professional practice need to have "extensive knowledge" of communication techniques and to be "skilled" in applying these techniques in the clinical environment. Communication skills and knowledge, however, are not unique to clinical management. Rather, they are considered an integral component of patient care.[2,18] What we don't yet know is which specific behaviors demonstrate that a therapist

possesses extensive knowledge and skill in communication related to clinical management.

The only other category that was considered by the respondents to be as critical a skill as communication (ie, received the highest median score [4]) was profession scanning, which involved being able to review the status of or changes in the profession as a whole. Interestingly, the median score needed for skill in profession scanning was higher than the median score for knowledge, indicating that the therapist would need to be independent in the use of the knowledge related to scanning the profession for changes, yet not need a thorough understanding of this concept. However, this seemingly incongruous finding may be due to the variability among responses on the specific behaviors associated with profession scanning.

Professional involvement and ethical practice is one of several categories that had median scores of 3 (second highest scores) in both knowledge and skill, suggesting that the respondents believed that the new graduate needs to understand and be able to use information related to being professionally involved and practice in an ethical manner, although the need for guidance in performance in these areas was indicated. However, this is another area that is not unique to clinical management in that professional involvement and ethical practice are expected of new graduates in general.[1,18,19] Again, what we do not know is if there are specific behaviors related to these 2 areas that are unique to clinical management.

In addition to communication and professional involvement/ethical practice, 4 other LAMP categories received the second highest median scores (3) in both knowledge and skill and were ranked in the top 5 for both scales. This finding indicated that the new graduates were perceived to need a good understanding of the concepts, yet assistance in performing tasks related to them. These categories included: delegation/supervision and time management from human resource management, stress management from management theory, health care industry scanning from environmental scanning, and reimbursement sources. Except for environmental scanning, these categories are consistent with content areas identified in the Normative Model[2] or May and colleagues'[18] Generic Abilities. Thus, there may be some overlap in what is already expected of the new graduate and what is unique to administration/management content.

Viewing the LAMP categories across all 3 scales (Tabs. 8 and 9) reveals that, although most of the LAMP categories were considered very important in the management of clinical practice, new graduates were not expected to have extensive knowledge of or skill in performing the majority of the components included in the categories. We conclude from these results that the respondents expect physical therapists to develop the basis for business-related knowledge and skill needed for clinical practice after entering clinical practice. How this might be done and who should bear the cost were not addressed in our study but are of concern given the economic conditions in health care today. Another issue that is unclear is whether the determination of when a therapist should develop LAMP content comes from the respondents' personal experiences, that is,

how they developed their knowledge and skill, or from their belief about how and when this knowledge and skill should be developed.

Regardless of the meaning of the scores assigned to the various scales, examining the commonalities across the top-ranked categories for the 3 scales indicates at least 2 important findings. First, the same 7 categories appeared at the top of all 3 scales. These categories covered a wide breadth of content, including components that involved working with others, managing one's self and one's work, and being a professional (involved and practicing ethically). Second, 5 of the 7 categories came from the LAMP element of intervention. In essence, these categories appear to reflect the LAMP content that most closely relates to patient management skills that dominate the educational preparation of the physical therapist beginning professional practice.

Although this study begins to identify differences in the salience of various LAMP content areas, more work is needed to provide additional insights into this issue. For example, each LAMP category would benefit from having an associated list of behaviors (expectations) that pertain to clinical management. These behaviors would not only clarify what a manager and other clinicians can expect from the new graduate, but also would provide educators with an evidence-based rationale for LAMP content to include in the professional education curriculum. These behaviors also might serve as a basis to ascertain student learning of the LAMP content during their professional education.

As with all research, this study is not without limitations. First, because this study was the first attempt to define the LAMP content for use in research, the Guide's problem-solving model[1] was used to organize the list of components in a manner that would be familiar to practitioners. Based on discussions with members of the original LAMP Task Force and the comments of our manager respondents, it was our impression that managers generally do not use this problem-solving model to conceptualize management tasks. Thus, the use of the Guide's framework may have introduced a level of complexity to the study that could have affected the clarity and relationship of the components within the elements and may have influenced respondents' ratings on the 3 measurement scales.

Although our research team believes that presenting the LAMP components in a format that would be familiar to practitioners in the field is beneficial, the conceptual framework used for future studies to organize the component list may need to be altered in order to facilitate the respondents' ability to provide complete and reliable responses. For example, a more traditional model such as that proposed by Fayol,[3,4] or some modification of it, may be more appropriate for organizing future research. Second, because there was minimal input from the self-employed sector of the profession, the measurements of the levels of importance, knowledge, and skill may have been skewed toward the organizational practice environment. Therefore, our results may only be generalizable to this environment. Future research will need to include a broader and more representative sample of respondents in order for us to better understand the knowledge and skills required of new graduates, irrespective of the practice setting in which they seek employment. Finally,

our respondents had the management expertise to interpret the meaning of each LAMP component in relation to the importance, knowledge, and skill scales used in clinical practice. Because future research may involve practitioners with considerably less management background, the LAMP components will need to be reformatted as skills, tasks, or behaviors to ensure consistency of interpretation and response.

Conclusions

Leadership, administration, management, and professionalism[10] are a part of every clinical practice in which physical therapists work. They form the foundation for the organization and operation of our clinical services, reimbursement for our services, and the potential growth and development of new physical therapist services. This research has mirrored the findings of others with regard to the level of importance of many of management-related functions encompassed within the LAMP content. However, it has gone beyond existing research by beginning to identify the LAMP content that is essential at every level of physical therapy--from manager to student. Some of the components identified in this study (eg, communication, professional involvement and ethical practice) are not unique to administration and management, although there may be behaviors within these components that relate more specifically to management functions within clinical practices. However, many of the components, such as delegation and supervision, reimbursement sources, and health care industry scanning, are integral aspects of the administration and managerial of clinical practices. Specific behaviors related to these managerial areas may differ based upon the level of the physical therapist within the organization. Regardless of content area, however, the articulation of LAMP knowledge and skills that are pertinent to administration and management may have a positive impact on the integration of LAMP content into clinical practice and ultimately may serve to unify professional educational expectations for physical therapists.

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