The PRIME model: a management solution in academic medicine

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Abstract

Background: The Health Sector and the rendering of health services in South Africa have undergone substantial adjustment since the political change in 1994, filtering through to academic medicine. The managerial responsibilities of the Heads of Department at Medical Schools multiplied. In order to improve their management skills; decrease their frustration; and optimally utilize the highly skilled person-power available, this study endeavoured to establish a management model for use by experienced as well as new Heads of Department in a School of Medicine, measured against the background of good management practices.

Methods: A descriptive, explanatory survey comprising a literature review, a questionnaire survey and a Delphi process was performed. The literature study covered a few aspects, including assessing the possible needs of Heads of Department, exploring factors impacting on their environment, as well as the difference between management and leadership, and the difference between various management models that may be applicable to management in an academic setting such as a Medical School. The second part of the empirical study was the Delphi process, which involved six experts from the areas of management, health management, and education. A quantitative approach with open-ended questions was followed, focusing on measurement of experts' feelings about these areas.

Results: Heads of Department are appointed in the academic environment with the primary focus on their educational achievements. Throughout the process, it was demonstrated that this is still relevant and needs to be part of the appointment process of Heads of Department in a School of Medicine. It was also indicated throughout this study that there is an increasing expectation from Heads of Department to take on sole responsibility for the management of their departments. In view of these developments, it was important to consider assisting them through establishing a management model, thus empowering them to manage their departments in the future. The main findings from the questionnaire to Heads of Department, the Delphi technique, and information obtained via the literature study enabled the researcher to make a recommendation on a management model that is flexible, individualized, relevant, and adaptable for Heads of Department at the School of Medicine at the UFS.

Conclusion: Resources and services are spread thin by challenges from political changes and other challenges such as the AIDS pandemic and tuberculosis. Emphasis has shifted from hospital-based care to primary health care adding another dimension to the management strategy of academic institutions. A management model, the PRIME model, was developed that is simple, flexible, allows for individuality, integration and efficiency and should be easy to implement. It adds quality to management tasks but also to lives. It embraces multi-tasking and still focuses on the key position of the leader, while allowing growth and development of new talent. It is adjustable and should be the model of choice to address the ever changing environment of health management. It is recommended that a future study be conducted evaluating the possibility of utilising the principles of the PRIME model in other Medical Schools in South Africa in order to assist them with the managerial problems they might be experiencing.

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Introduction

The Health Sector and the rendering of health services in South Africa have undergone substantial adjustments since the political change in 1994.[1] This has filtered through to academic medicine, impacting largely on the management responsibilities of the Heads of Department at Medical Schools. Although no additional help was offered to the Heads of Department, their managerial responsibilities multiplied.

Apart from political changes impacting on the academic environment, the health sector in particular faces challenges such as the AIDS pandemic and tuberculosis. Resources and services are spread thin by these challenges. Emphasis has shifted from hospital-based care to primary health care adding another dimension to the management strategy of academic institutions. Factors influencing the macro environment of an academic institution are financial, technical, political, socio-economic, legislative and legal, as well as educational in nature.

Roodt states that leaders are necessary to provide focus and direction of intent and effort.[2] Vision statements are utilized to ensure that the strategy plan of a company is an integrated and sustainable programme. Renton defines a vision as a focus on a better world ahead that we want to be part of and be proud of.[3]

Wilson and McLaughlin say the following about leadership and a general manager: *"We see management, in contrast, as more proactive and vigorous, as the job applying the organization's resources to programs for which priorities have been established. It involves planning and strategy, making decisions about programs related to purpose and needed resources, setting control processes in motion to monitor progress and provide feedback, modifying decisions, making new plans". "In our view, leaders can manage and managers can lead. The special ingredient the leader provides is that the individuals to whom he provides leadership come to believe that what they are doing is good, has value, is important, and can be achieved." "Our model of the most effective dean, as described earlier, integrates management skills and leadership ability." "With this they establish the difference between management and leadership but also confirm that academics need both."* [4]

Smit & De J Cronje point out the difference between leadership and management.[5] Leadership is defined as the process of directing the behaviour of others towards the accomplishment of the organization's goals. Leadership and management are two distinct and complementary sets of complex management activities.[5] Leadership is a total transformative experience through which an individual comes to a new and altered sense of identity. Leadership is the expression of four essential skills, namely those self-same skills allowing a person to find meaning in events which could be a debilitating experience.[6] These are the ability to engage others in shared meaning, the distinctive and compelling voice of the individual, a sense of integrity (including a strong set of values), and the most critical of the four, an "adaptive capacity". Smit & De J Cronje define management as the process of planning, organizing, leading and controlling resources of the organization to achieve the organizational goals.[5]

A professor is a leader of education and research. Part of his (also refers to female in all cases) armour is good managerial skills and a management model enabling him to achieve the goals of excellent education and research of which he is the custodian on behalf of the community at large. In an attempt to improve their management skills; decrease their frustration; and optimally utilize the highly skilled person-power available, this study endeavours to establish a management model for use by Heads of Department.

Methods

A descriptive, explanatory survey comprising a literature review, a questionnaire survey and a Delphi process was performed. The literature study covered a few aspects, including assessing the possible needs of Heads of Department, exploring factors impacting on their environment, as well as the difference between management and leadership, and the difference between various management models that may be applicable to management in an academic setting such as a Medical School. From this, a questionnaire was developed to use in determining the managerial needs of Heads of Department of the University of the Free State's Medical School. Information was combined with a further literature study on needs of Heads of Department in general, to develop a management model.

The second part of the empirical study was the Delphi process. The Delphi technique was harnessed to test this management model, using a representative group of people in management positions with specific reference to deans, heads of medical schools, heads of health departments and senior clinical managers in South Africa. A quantitative approach with open-ended questions was followed, focusing on measurement of experts' feelings about these areas. The systematic process of the Delphi technique provided a suitable medium to get consensus on this management model.

The study was approved by the Ethics Committee of the University of the Free State.

Results

This study determined that a management model for Heads of Department at the Medical School of the University of the Free State should comprise the following characteristics: Simplicity; flexibility; individuality; integration; efficiency; functionality; ease of implementation; quality; multi-tasking of the model; position of the Head of Department - responsibility remains ultimately seated in the Head; fit into performance management system; all-inclusive model (inclusiveness) - the model must provide for all options and be adjustable to provide for any gaps that may develop.

In the academic environment, the model should also serve the following: Service delivery; postgraduate education and training; undergraduate teaching; academic management; research; office administration; strategic management.

Discussion

Ultimately a successful model should lead to better patient care and service outcomes, organizational stability and optimal financial viability. Any management model should be able to function within a specific environment and under the structure of a service plan. The specific micro environment, in the case of the Heads of Department in this study, is the department of the Medical School under his care. A service plan incorporates a strategic planning process, as well as a strategic management and cost-centre design. The question is how to do good planning? A sensible, processed "roadmap" will help to direct the planning process and the quality of the planning may be judged by the review feedback of others.[7] According to Rice and Upson, successful planning is linked with management-by-objectives (MBO), assigning responsibilities, must be integrated with budgeting and must embrace performance recognition.[7] In a large organization

like the Faculty of Health Sciences of the University of the Free State, managerial skills are needed by the middle management level.[8] These include communication, planning, leading, controlling, culture-building, facilitating, negotiation and motivation.

The needs of Heads of Department, the environmental influences on the management processes of Heads, and the management models that were available, were researched and taken into consideration. No other management model for medical schools in particular existed at the time of the research. A model, incorporating the above requirements, was developed and called the Penta Rotating Integrated Management Efficiency (PRIME) model.

"Penta" (Latin for five) refers to the five main areas (other than strategic management and office administration) which can be seen as the scope of management of a Head of Department (HOD). The key areas are postgraduate education and training, research, undergraduate teaching, academic administration and service delivery. Strategic management and office administration are primary responsibilities and cannot be separated from the position of Head of Department. The "rotating" aspect of the model refers to the concept that the Head of the Department may delegate the management of certain areas to senior academic staff members in the department, and may rotate these areas as he sees fit. However, he will remain responsible for all areas in an over-arching capacity, as the senior staff members report to the Head of Department. This immediately leads to "integration" represented by the "I" (Integrated) in PRIME. As indicated, the Head of Department will not be able to hand over either all the responsibilities of the department or any main area to another consultant. Thus the department is managed by shared responsibility, establishing the integration aspect of the model. Sykes defines "to integrate" as "a complete process by an addition of parts" or "to combine parts into a whole".[9] "M" in PRIME stands for management, referring to a management platform for Heads of Department. "E" in PRIME represents efficiency. Sykes defines "efficiency" as "a state or quality of being efficient" and "efficient" as "being productive of effect", "competent" or "capable" - that which makes something what it is.[9] The focus of the model is precisely to establish an efficient framework for Heads of Department within which to manage their departments.

Figure 1 is a schematic representation of a management model for Heads of Department (HOD) as a possible solution for their managerial challenges. In more detail, the PRIME model envisages that the Head of Department will only have strategic management and office administration as his direct responsibility, and postgraduate education and training as a permanent area (not rotational). Other areas outside the core area of the department (in black in Figure 1), may be rotated. At any specific time, only one of the rotating areas will additionally be under the care of the Head of Department. [The large (black) arrows in the model indicate the rotation process]. The opinion of the author is that Heads of Department should continue to take responsibility for postgraduate education and training. This is based on the fact that the appointment of Heads of Department is in the majority of cases linked to their academic qualifications, regarded as the highest criterion for the appointment. For instance, in the appointment of the Head of the Department of Surgery, the surgical skill and academic level of the candidate will be the determining factor. The Head of Department is thus the most suitable candidate to spearhead and manage the postgraduate education and training. Figure 1 illustrates this concept by the large (black) arrows bypassing the postgraduate education and training section, which is also coloured differently (green) to indicate the area of expertise of the Head of Department. The Heads of Department are thus not given a choice in taking responsibility for managing postgraduate education and training. The Head of Department chooses one of the four other areas, (research, academic management, service delivery or undergraduate teaching), and delegates the management of the remaining three areas to senior academic staff members in the department according to the model as previously discussed. The large white-filled arrows in the pentagon indicate areas that are rotated. A green-filled arrow in the pentagon indicates an area chosen by the Head of Department as his managerial responsibility.

Equity and the establishment of equal opportunities are important in South Africa. Within the PRIME model some of the areas may

Figure 1: Penta-Rotating Integrated Management Efficiency (PRIME) Model
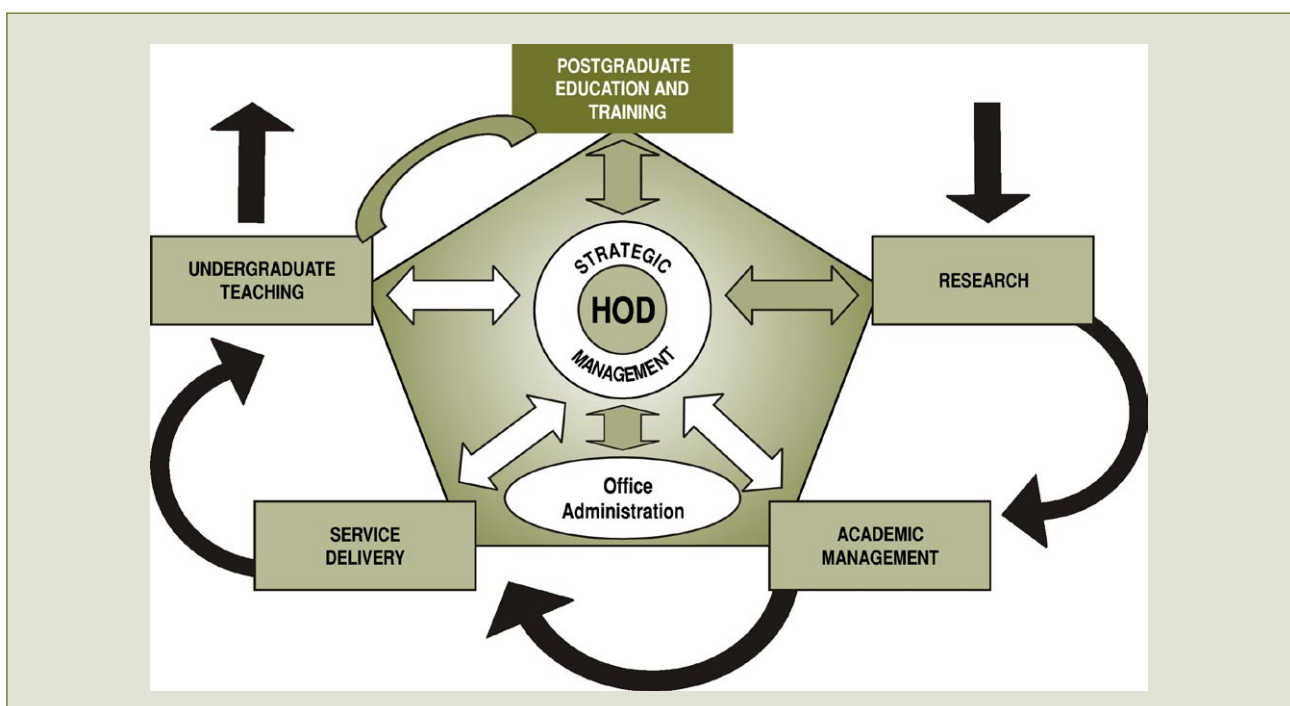
be allocated, as managerial responsibility, to individuals from the previously disadvantaged groups, thereby addressing equity and instilling the process of "growing your own timber" and cultivating future Heads of Department. Undergraduate and postgraduate education and training are important for academic development. The bridge between these areas in Figure 1 is indicative of the shared human resources necessary to establish proper student administration in a department. Numerous students (or "customers") are involved in these two areas.

The cost implication of such a model is relevant as affordability may impede implementation. It is therefore suggested that it be implemented in all the larger departments e.g. Surgery, Paediatrics and Internal Medicine, but that smaller departments form groups (e.g. "Surgical Disciplines" encompassing Urology and Plastic Surgery) which may share administrative personnel. All Heads of Department, even in the small departments, have secretaries who may take care of the fifth main area namely office administration. Strategic management remains the sole responsibility of the Head of each department (large or small). Research in the smaller departments may also be managed by shared research coordinators and assistants. In the larger departments non-senior members (e.g. another specialist or a registrar or a medical officer) can take responsibility for research. The affordability and the level and intensity of the responsibilities may dictate the category of the administrative support personnel appointed for this model (from administrative clerk to a chief administrative officer).

The PRIME model is simple in its approach by breaking down complex situations into components that are manageable. The rotating aspect allows for flexibility and individuality. The responsibility shared by many senior members of the staff integrates available man-power and skills. This approach may be spiralled down to lower levels of management, thus involving and integrating even more of the staff members. Efficiency can only be enhanced by utilizing all available skills. By allowing choice in the process, focus may be placed on those abilities of the specific staff member that is his field of competency, further adding to efficiency. The model improves functionality of the Head of the Department as the over-arching manager who may now also focus on those aspects which is his field of expertise. The PRIME model should be easily implemented as it does not add to the burden of the Head of the Department, but rather utilizes resources (e.g. man-power, skills) more efficiently. It adds quality, not only to the management task in each department, but also to the lives of those involved. Shared responsibilities lessen the burden on some and add esteem to others. The PRIME model can incorporate any of the managerial tasks and is multi-tasking in its scope. The Head of the Department remains ultimately responsible for his department and the model does not take away anything of the character of this key position. However, other people are allowed to develop many more skills on managerial and leadership level, cultivating a spirit of responsibility and growth for future leaders. "Performance management" becomes an active contribution to a potential leader's development instead of just a bi-yearly evaluation session. The PRIME model is flexible and thus can be adjusted to allow for any new managerial challenges that may crop up. Changes on political and health-care level impacting on the academic environment can be addressed by the PRIME model as each of the five categories may be managed as a separate sphere via the PRIME model again allowing for infinite possibilities. Neufeld *et al.* indicate that, in traditional organisations, knowledge is fragmented into

disciplines and most individuals are encouraged to focus on their own area of expertise.[10]

The model was tested in the cost centre of the Cardiology ward and implemented by module leaders for undergraduate teaching. It was found to be reliable and was recommended for implementation elsewhere in the Medical School. It is recommended that the PRIME model be implemented via seven stages in the rest of the Medical School, namely:

- Phase 1: Approval phase.
- Phase 2: Information and marketing phase.
- Phase 3: Situational analysis and adaptation of the PRIME model.
- Phase 4: Pilot of model
- Phase 5: Implementation of the PRIME Model.
- Phase 6: Research on the PRIME model
- Phase 7: Monitoring and evaluation of implementation of the PRIME model.

Conclusion

Health management, with specific reference to hospital organizations, has been a topic of serious discussion since as early as the 1940's. Change is a constant, and the question is what direction should be taken in addressing change, also in health management. Change is demanding on individuals and resources. One should stay one step ahead in anticipating change and managing resources to embrace it and utilize it to the benefit of the country. Leadership, from global to organizational level, is needed to manage change and to initiate new initiatives to positively use changes. It is expected from Heads of Department on organizational level to be those leaders for education and service in the health sector. However, they are also the managers. The PRIME model is a tool to be utilized in their quest to be excellent leaders and managers. It answers to all aspects of a good management model. It is simple, flexible, allows for individuality, integration and efficiency and should be easy to implement. It adds quality to management tasks but also to lives. It embraces multi-tasking and still focuses on the key position of the leader, while allowing growth and development of new talent. It is adjustable and should be the model of choice to address the ever changing environment of health management. It is recommended that a future study be conducted evaluating the possibility of utilising the principles of the PRIME model in other Medical Schools in South Africa in order to assist them with the managerial problems they might be experiencing. ⚕

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