INTRODUCTION
Two of the most difficult tasks facing pharmacy educators today and in the future will be; (i) their ability to manage clinical programs, and (ii) to generate the resources to provide the clinical education which will be necessary for pharmacy students in the future. The management of clinical education programs poses a challenging problem for not only department chairs and/or associate deans, but also the deans of pharmacy as well. This challenge is brought about because of changes in the health care system, which place added restrictions and burdens on the pharmacy system and practitioners.

Pharmacy educators have relied upon the goodwill of practitioners in the various practice areas including community, hospital, and geriatric facilities as well as other specialty areas to provide volunteer faculty who enhance the clinical training and education for their students. This has occurred at both at the bachelors and PharmD levels. While schools of pharmacy have indeed expanded their clinical faculty, it is not practical to think that a school of pharmacy can provide all of its professional practical experience under the guidance of its full-time students, whether it be for a BS or PharmD level education. The adjunct and/or volunteer faculty are critical to the long-term development of pharmacy education. The contribution of these faculty continue to be significant. The medical model which established the utilization of volunteer and adjunct faculty, while having its own peculiar problems, is still the best model that we have to follow in clinical education.

As schools of pharmacy have become more conscious of the needs for clinical programs and also the need for added resources, it has become more difficult to manage the clinical programs of a school of pharmacy. As changes have occurred within the health care system, such as increased cost constraints placed on hospitals, and increased competition both in the community and hospital sector, it is becoming increasingly difficult for practitioners to give their time freely to education. In many instances this change is brought about because of the corporate structure of health care and the corporate influence. The challenge of managing clinical education programs and clinical service programs encompasses a number of areas. This chapter will address a number of these areas, but is by no means all inclusive. Areas addressed in this chapter include the following:
1. Affiliation development: clerkship/externship sites(1,2);
2. Methods for utilizing limited resources in the development of clerkship sites and expanding clinical faculty(3);
3. malpractice insurance for students and faculty;
4. faculty tracks for co-funded faculty;
5. development and management of entrepreneurial programs developed by colleges and schools; and,
6. pharmacy faculty reimbursement plans(2).

These are a number of the areas which an academic administrator must consider in the management of clinical programs and services. The political issues related to the relationships between hospitals and colleges as well as colleges of pharmacy and other health care institutions are critical issues. It is imperative that the dean of the school of pharmacy, as well as the individual responsible for the pharmacy practice programs, be cognizant of the health care issues within their community, state and nation, as well as those issues at the national level which will impact on their educational programs, both today and in the future. Communication with the other health care institutions is critical to the long-term future of pharmacy education.

SELECTION OF CLERKSHIP SITES
The selection process for clerkship sites is the first step in the management of clinical education programs. A responsibility of the department chair and/or dean or associate dean is to negotiate with hospitals, community practitioners and other health care facilities affiliations which will provide their students with the educational opportunities which are needed for clinical education. The AACP special interest group on pharmacy externship training programs of the Section of Teachers of Clinical Instruction has worked for many years on the development of sample affiliation agreements as well as preceptor manuals and other materials dealing with the selection of clerkships. However, the selection of clerkship sites today and in the future will be more difficult because of the changes in the health care system. Pharmacy practitioners have clerkship sites based on educational needs, qualifications of the practitioners at the site, attitudes of faculty, and the quality of services provided. The negotiation with the administrators of health care facilities including hospitals, geriatric facilities, chains, and independent community pharmacists is very important. The groundwork needs to be carefully prepared to show the administration of a facility, chain executive or a store owner that: (i) the clerkship program will benefit the profession of pharmacy; (ii) there are benefits to the health care facility as well; (iii) there is a clear delineation of cost of the program (see Appendix A, sample affiliation agreement); (iv) there is a clear delineation of liability issues and the evaluation process; and (v) their facility is of importance to the educational programs of the school or college.

The individual who is responsible for the coordination of externship or clerkship programs is a key to relationships with the clerkship sites. While funds may not be expended for the majority of the clerkship sites in order to maintain a positive relationship, it is necessary for the director or...
coordinator of clerkship/externship programs to maintain a level of understanding of the practice within the various sites as well as to have an excellent working relationship with those practitioners within the community where they work. The relationship between the coordinator or clerkship program director and the practitioner must be built on mutual respect. A well founded agreement/description of the program so that each party understands the mission and need of each other as well as the limitations of each is essential to a sound program. These affiliation agreements should be reviewed on a yearly basis. Each of these affiliation agreements has different components as dictated by each of the institutions as well as the differences in the financial arrangements between the institutions.

MANAGEMENT OF CLERKSHIP SITES
Clinical sites, as well as externship sites, need to be evaluated on a routine basis by the school of pharmacy. Because of the intensity and the time that is needed to monitor these programs, it is recommended that schools relegate the responsibility for externships to individuals. This individual may have other responsibilities, but it is critical that they have a firm understanding of the practice areas, as well as be well-grounded in the academic requirements and goals and objectives of the school. It is most helpful if this individual is a practitioner. This increases their credibility.

To merge the clinical or externship site’s mission with the goals and objectives of the school, is essential for a successful program. Therefore, the individuals who serve as the coordinators of these programs must have the ability to be diplomatic, yet can firmly state what is needed and be willing to terminate a program that is not meeting the educational goals and quality requirements of the school.

There have been numerous discussions of the need to visit clerkship sites in order to manage the programs. The number of visits per year, or per term, may vary depending upon the practitioner and the specific site. It is recommended that the sites be visited at least once per term and preferably once per student rotation; however, this may not be practical depending on the size of the program. Also, the value of multiple site visits has not been documented.

INCREASE CLERKSHIP AND CLINICAL FACULTY NEEDS
As more schools of pharmacy move towards the entry level PharmD degree, the major issue facing them will be the need for increased clerkships and sites. Externship sites remain relatively constant as a needs issue; however, the clerkship needs will increase dramatically. In order to increase clerkship sites, academic administrators need to be innovative in their approach to institutions and in resolving the problems of finding adequate clerkships. The schools of pharmacy must develop marketing and public relations plans to recruit adjunct volunteer and part-time faculty and additional sites and in order to do so must provide incentives for programs to want to be involved in the educational programs of the school of pharmacy. As stated in the previous section, it is imperative to show the benefit to having an affiliation agreement between the school and practice site. There are a number of incentives or services that the school can provide to practitioners including, but not limited to the following:
1. free continuing education programs (or reduced fees);
2. provision of drug information services;
3. free publications or subscriptions to journals pertinent to teaching programs;
4. either free or reduced costs on tickets to sporting events in universities that have athletic events;
5. public recognition of the preceptors and sites for their cooperation with the school by listing them in publications of the university, sending them letters each year renewing their appointments as volunteer faculty members, letters to corporate entities thanking them for their support so that they can use this in public relations programs, appropriately framed preceptor certificates;
6. specific criteria for promotion for adjunct, part-time and volunteer faculty who are providing outstanding services to the educational program;
7. the possibility of developing honorariums and/or payments for specific teaching programs;
8. schools and colleges of pharmacy in some cases have hosted breakfast, luncheon or dinner meetings with directors of pharmacies in various areas in order to encourage their communications with each other as well as to promote the programs of the school.

The following are a number of approaches to increasing clerkships and their subsequent management.

Co-funded Positions
While co-funded positions place the individual faculty member in a position of having two “bosses,” at the same time, it expands the limited resources available to both the educator and practitioner. However, there are some points that must be stressed in developing co-funded positions. These include the following (NOTE: these same concepts can and should be used in any practice area):
1. Co-funded positions must, by their nature, be of benefit both to the academic unit and to the service unit. Because of this, schools should consider those individuals who are on co-funded or joint positions as non-tenure track positions. The reasons for this include “softness” of the funding for the position, as well as the need for those individuals to place the majority of their emphasis on service and teaching. After all, if the individual is co-funded by a hospital, healthcare facility or HMO they will be expected to deliver a specific service to that institution. This is not to say that while they are delivering that service they cannot fulfill their educational responsibilities as well. However, it places an extreme burden on the practitioner/educator if they are also expected to produce scholarly activity at a level commensurate with their peers who do not have the same service level. Therefore, faculty should be strongly encouraged to develop scholarly pursuits and skills, but at the same time, this should not be placed as a rate limiting factor on the development of their clinical services and/or teaching programs. The quality of clinical services, research, and teaching should be the same for non-tenure and tenure-track faculty; however, the emphasis may differ, i.e., percentage of time for research in a co-funded position may be significantly less than in tenure track position.
2. Co-funding positions by schools and institutions should be considered in order to stretch the dollars of the school of pharmacy and the institution to enable them to enhance or increase the number of clerkship sites they have available, while at the same time providing a method for the institution to begin the development of clinical pharmacy services, or to expand clinical pharmacy services. These
Jointly funded positions will enhance both programs. Obviously, if the hospital is spending money for one-half of the individual they expect to get at least one-half, if not more, in return for their investment. The payoffs for the school of pharmacy is that the individual who is in the co-funded position is a role model practitioner/educator. They are a role model because if they are not there, their service has to be covered by someone else, and the service is meaningful, otherwise the institution would not be paying for that individual. By going to co-funded positions it also effectively lowers the FTE count in the service institution. The institution may find it easier to spend contract money than it is to spend salary dollars and allocate new FTEs. It is preferable if co-funded positions can be funded from one source, i.e., if a position is funded at $40,000 and it is to be split 0.5 FTE and 0.5 FTE between a school of pharmacy and a hospital, it would be preferable if the hospital paid the school of pharmacy for the full salary and fringe benefits of 0.5 or vice versa, thus decreasing the FTE count within the institution. Also, the faculty member will receive only one check.

**Initial Investment in Sites**

In order to stimulate an institution to develop clinical services, the school may have to make an initial investment. The school may want to consider funding a clinical position full-time at a facility to provide clinical services and to develop pilot programs for that institution with the premise that at the end of the first academic year the position would then be renegotiated. Assuming that the position has proven a benefit to the hospital, co-funding for the position can be sought from the hospital. This has been an effective way of developing co-funded positions as well as clinical services in hospitals. This approach requires the school to initially invest funds for the long-term benefit of a solid relationship with the institution. For example in year one the school provides 100 percent funding and then decreases the funding each year by 25 percent until the position is 100 percent hospital or a predetermined salary split is reached. An established evaluation process for both the hospital and the school is essential for this to work.

**Residents and Fellows**

Another method to develop clerkship sites is through the utilization of residents and Fellows (see ASHP definition for residents, etc.). By co-funding or funding Fellowships and residency positions for institutions, the school can stimulate the development of new clinical service programs which result in clinical clerkship sites.

**Contract Teaching Services**

The school can also contract with institutions to provide clinical pharmacy services and/or specialty services. A case in point is drug information. As drug information centers become more sophisticated from the standpoint of technology and more expensive to operate, the duplication of centers between hospitals is not cost effective. Through the school of pharmacy developing a strong drug information network, contracts may be developed with hospitals to provide DUE, QA and drug information services to institutions. Today’s climate in the health care system makes this a viable alternative and, in fact, demands such economies of scale.

Contract clinical services is also an effective way of increasing clerkship sites i.e., the faculty member is paid by the school and may receive an additional stipend from the contract. There are a number of faculty reimbursement plans that can be explored.

**Management of Joint Clinical Programs: Agreements**

Once the increased number of clerkships and clinical faculty needs have been met, the question of management becomes a major issue. The management of clinical services requires the administrator in the school of pharmacy to be cognizant of the needs of the institutions with which they are working. If role models are to actually exist, then they must have an ongoing service responsibility and, therefore, report to the director of pharmaceutical services within the institution or appropriate individual in the community facility. This assumes that the school is not contracting for services directly.

Arrangements are key points which must be kept in mind to successfully manage joint clinical programs with institutions. The use of the correct “political” route in the institution for approval is critical. This may require a different approach than the direction which the university might normally take. These include the following:

1. A job description is required which can be agreed upon by the institution and college and specifically spells out the responsibilities of the clinical practitioner. If the responsibilities of the clinical practitioner are not clearly delineated, the practitioner begins to be pulled by the hospital and the college for 100 percent of their time. If indeed it is a position that is 50/50 then the emphasis needs to be placed on service and teaching. The scholarly activities and committee work in the school must, by necessity, become a minor component of the individual’s job responsibilities.

   Administrators in schools of pharmacy must realize that upon entering into joint ventures with the practice sector, practice and teaching within that practice site becomes a prime responsibility.

2. Specific affiliation agreements which include the terms of a contract are an absolute necessity.

   A problem may occur due to differences in fiscal years between the hospital and college. The university will have to be more flexible than the institution. If the institution’s contract year is different from the university, the difference and its implications will have to be taken into consideration in the development of a contract. The bottom line is flexibility and imagination. Jointly funded programs with institutions are very feasible and workable and will extend the resources of the school of pharmacy, while at the same time providing a needed service to the institution.

3. Evaluation of the personnel involved in co-funded positions is extremely important. Obviously, an individual may be a fantastic educator but provide terrible service or vice versa. Both the institution and the college must be satisfied with the individual. Therefore, it is of the utmost importance that the department chair and the supervisor or director in the institution review the faculty member’s performance on a routine basis. Methods for determining the rates of increase for salaries and stipend determination need to be addressed.

4. From the standpoint of recruiting a young faculty member, the fringe benefits are usually better within the academic unit and, therefore, it is to the advantage of the
school and the institution for one paycheck to be paid to the individual. It is most beneficial for that to come from the school of pharmacy, thereby, eliminating problems with increased FTE counts; this will benefit the institution if there are restrictions within the practice setting.

5. These co-funded positions, by their very nature, should be non-tenure track positions. An institution could place these in the tenure track, however, since this is essentially “soft” money, it would seem to be a very dangerous move on the part of the college. Also, it would be difficult to beat the clock for tenure if more than 20 percent was devoted to service.

The management of clinical services is a very complex issue, primarily because of the diversity of the institutions with which the chairman of the department or associate dean for clinical services is working. This will become more complex in the future rather than simplified. A firm grounding in the different practice areas and the ability to communicate effectively with administrators within institutions and to assist them is critical to the successful management of a clinical program. No longer can schools of pharmacy say “take our students for us and we’ll send you a thank you note.”

The issue of payment for clinical services by schools to institutions (hospital or community) must be addressed as well. Pharmacy practice sites are critical to the long term development of clinical education and pharmacy education in general. Our working relationships must be partnerships with them and in order to effectively manage clinical service programs it is essential to use imagination and to be flexible in working with the practice institutions. Every site may need a different type of management or approach in order to successfully utilize it for clinical education.

Management of clinical programs has been a problem within medical schools. The relationships between service, education and research have always been a critical issue, simply because all three have a tendency to place demands on the individual faculty members and practitioners. However, there must be a balance among the three that is reflective of the individual job description and the particular institution. The issue of job descriptions and affiliation agreements that delineate responsibilities of both institutions is critical.

SERVICE CONTRACTS

Another way to enhance the salaries of the faculty and staff, as well as to develop clinical pharmacy services, is through personal service contracts. There are a number of institutions in the country that have developed practice plans; this is used only as an example. The practice plan allows for the enhancement of a faculty member’s salary in the private sector. The development of new clerkship sites and the retention of clinical faculty is an important component or end result of this particular reimbursement plan. An example case in the development of clinical services and clinical sites is as follows:

“Faculty member ‘X’ an excellent clinical faculty member, had become disenchanted with academia because of salary and also because of his inability to become mainstream within the pharmacy practice area. While being an outstanding teacher and educator, he really felt that his role in pharmacy should be in the practice setting. Torn by this dilemma he met with the dean and department chair and dis-
cussed his reservations and why he was considering leaving. In order to keep the faculty member, who was a very active contributor to the academic community, a proposal was made to a local hospital for which he was considering going to work. It was proposed that he be placed at the hospital for one year paid totally by the school of pharmacy (this individual is a tenured associate professor). Nine months into the year the dean, the department chair, administrator of the hospital and director of pharmacy met to discuss the virtues of the clinical programs the faculty member was developing. The hospital was extremely pleased with the programs and wanted to continue them. The school was in total agreement. The school and hospital entered into an agreement for the college to provide clinical services with this individual serving as Assistant Director for Clinical Services and Education. The individual maintained his position as a tenured associate professor of pharmacy. His base salary for this position was maintained. The service contract included 50 percent of his salary returned to the college as salary released. The funds from this contract were then utilized to hire a clinical resident to work with the faculty member at the hospital, as well as to provide the faculty member with a stipend. The initial stipend was $5,000 and increased over each year as the contract was continued. The end result was a faculty member who was extremely satisfied with his practice, and yet still contributed significantly to the educational programs of the school of pharmacy. Likewise, the hospital developed outstanding clinical services through the individual faculty member and expanded their clinical staff under the faculty member’s direction.

The college has to compromise in that this individual is no longer as involved in teaching didactic courses and in committee work as he would have been if he were at the school full time. The benefit is an outstanding clinical clerkship site that is now handling eight to ten students per rotation through the faculty member, the resident, and other clinical staff of the hospital. At the same time the faculty member’s base salary was above market level, keeping them on the faculty. The stipend is only received by the faculty member as long as the contract is in effect.”

This is the case where the school working with the hospital reviewed its resources and determined how they both could be utilized to benefit education and service.

PAYING FOR INDIVIDUAL CLINICAL CLERKSHIPS

In some instances it may be more advantageous for the school of pharmacy to contract with institutions for clerkships. For instance, if the school of pharmacy does not have a faculty member in the area of nutrition or nutrition support, but yet would like to have opportunities for students in these clerkship areas, it may not make sense for the college to hire a full-time faculty member in this area, especially in the face of limited resources. If there are local practitioners who have an exemplary pharmacy practice in the community, an approach to resolving the issue is to contract with them for individual clerkships. If, for instance, there are 10 to 12
students who want a clerkship, it is more cost effective to contract with an individual practitioner or institution to provide that clerkship experience. Placing funds in contract dollars is also more efficient from the standpoint of no fringe benefits paid. Therefore, the total cost per clerkship can be reduced dramatically by using part-time faculty to handle specific clerkships.

It is estimated that in an entry-level PharmD program one full-time clinical faculty member can provide approximately 14 to 20 four-week clerkship blocks (this is predicated on a faculty member having 2-4 students at a time for 28 weeks of the year). The cost for a full-time faculty member, if it is a first-year faculty member, would be approximately $52,000 plus fringes. Those same 24 students in a contract service can be provided the educational component at a significantly lower cost. Rates of $300 to $600 per clerkship per student are well within reason. If the school was paying a maximum of $600 per student per clerkship and needed 24 clerkships, the total cost would be $14,400. Obviously, the entire curriculum could not be run this way, however, a mix utilizing this particular approach would enhance the number of clinical faculty, the variety of clerkship sites available and maximize the resources utilized by the school of pharmacy.

As the diminishing supply of clinical educators becomes a greater problem (due to increased competition from the private sector as well as the pharmaceutical industry), it is incumbent upon the pharmacy educators to develop programs which will effectively manage their clinical services. Resources must be provided to manage these services; to do so effectively requires time as well as resources.

MALPRACTICE INSURANCE FOR STUDENTS AND FACULTY

While many institutions are self insured, especially those in the public sector, there are some issues that should be addressed related to malpractice insurance for students and faculty. Obviously, students who are involved in clerkships of any type should be covered by malpractice insurance by the school of pharmacy. This can either be done through one of the insurance companies or associations with their student insurance plans and/or through the self-insured program of the institution. Students are covered any time they are involved in an active program directly involving their curriculum. Faculty are also covered under the majority of these policies (each institution should check its policy) if they are supervising students. The faculty are covered as long as they are directly supervising students. However, unless there is a specific rider or specific policy on each individual faculty member, the policy usually does not cover the faculty if they are involved in practice and students are no there. This has not been an issue that has raised many red flags in pharmacy education, but it is one that must be looked at in assuring appropriate insurance for the clinical facility. This is a management issue which can be resolved very easily and quickly if it is handled prior to a claim.

One recommendation is to cover all clinical faculty and/or any other faculty who are directly involved in providing services to an institution. If these faculty members are providing services through the school of pharmacy (i.e., a contract for services from the institution to the school), then they should be covered under a separate malpractice insurance policy. Proof of insurance for clinical sites is becoming the standard language in affiliation contracts. Insurance companies will provide policies and certificates to attach to letters of affiliation and agreements with institutions. Risk management issues are extremely important in the hospital and should be considered by the school in all contracts/agreements developed with institutions and/or community settings.

TENURE OR NONTENURE TRACK POSITIONS

The issue of whether clinical faculty members who are heavily involved with service commitments should be on tenure or non-tenure track positions has been discussed at length. Should there be different routes for faculty depending upon their responsibility? The answer is, yes. Sources of funding make a difference as to whether a faculty member is in a tenure or non-tenure track position as does the level of responsibility. If the faculty member has a service level of 50 percent or more, then the scholarly activities required should be reduced. While there are clinical faculty who will meet any requirement given, no matter the amount of commitment, it places the majority of our clinical faculty in jeopardy from the standpoint of time to develop a strong scholarly program.

There are faculty who are more heavily involved in research and teaching, while others are more heavily involved in service and teaching. Each faculty member should have some requirement for scholarly activity in order to maintain their position in the academic community: however, it is not necessary for all faculty to be in a tenure track position. In fact, it can be an issue which causes the clinical programs tremendous difficulty.

There is a need to monitor the number of faculty who are in non-tenure track positions. There must be a core faculty who are on tenure track in order to assume a stable program that continues to develop scholarly pursuits, teach, and provide service.

COLLEGE/SCHOOL PRACTICE VENTURES

As schools of pharmacy seek additional resources for their academic programs, they have entered into practice and service ventures which compete with the practice sector. Some of these ventures include:

1. management of services for institutions, i.e., contract pharmacy services;
2. clinical analysis or toxicology laboratories designed to serve hospitals and other clients;
3. pharmacokinetic services;
4. community pharmacies;
5. home health care ventures;
6. geriatric consultant companies; and
7. nuclear pharmacy services.

These are commercial ventures as such and there are several management issues that arise because of them:

1. Impact on the institution’s tax status. If the venture cannot show a direct educational benefit and/or mission it may need to be established as a separate corporation, paying taxes. (This also can be complicated by the amount of revenue generated. Obviously, the university’s general counsel would need to be involved from the beginning in such a venture.)
2. Development of the venture as a cost/revenue center. The objective in most, if not all cases, would be to increase income for academic program support as well as faculty income.
3. Relationship of the venture to the educational mission of the institution.

4. Control of the venture from the standpoint of management and integrity. It is essential that any venture such as this have:
   a. a yearly business plan;
   b. a yearly expense and income budget;
   c. a method of building a reserve for contingency as any business would;
   d. a management team with clearly delineated responsibilities and lines to administration;
   e. a plan for the dispersal of excess revenue over income; and
   f. a real benefit to the academic program.

5. The political scene may become intense with alumni, practitioners, state association, and industry if the venture is in direct competition with them. This must be weighed when starting such a venture. It would be prudent for the dean to keep influential senior pharmacy practitioners in the state or area informed of such a venture so as not to create an inadvertent confrontation. The decision may be that such a conflict of interest between the constituents of a school and its administration is unavoidable. The university administration must weigh the benefit of the venture vs. the risks. This is true of any business venture.

6. If the venture benefits only one or two faculty, a problem may arise within the university as well. The following is an example of one approach to the management of such a venture:
   a. School “x” established a clinical analysis laboratory to analyze blood samples of five specific drugs. The initial investment by the school was the time of a faculty member to explore this venture.
   b. A faculty member established the laboratory, meeting state and federal guidelines, utilizing initially available equipment that was available for research.
   c. Clients were contacted by the faculty member and prices were established that were in the middle of the market. Service to the clients was the key (i.e., turnaround time of samples was less than the competition and yet quality was still present).
   d. An initial revenue target was established as well as an expense budget

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   \begin{align*}
   \text{Revenue target} &= \$78,000 \\
   \text{Direct Expense}^2 &= \$30,000 \\
   \text{Excess Income} &= \$48,000
   \end{align*}
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   \(^2\) Direct expense includes all materials; purchase of new equipment; fees; supplies. Utilities and rental of space from school not included. Time release given to faculty member for service.

e. The $48,000 income was then divided as follows:
   - 40 percent to department for faculty development, equipment, travel, supplies and graduate stipends;
   - 20 percent to the dean’s office for equipment purchase, faculty development, travel, seed research funds, etc., which could be used for entire faculty;
   - 40 percent to the faculty member who serves as Director of the Laboratory in the form of a salary enhancement, up to $10,000 and fringes.

   This venture provided a direct benefit to a specific faculty member, but then due to its success, the department reaped benefits from the venture as did the entire faculty. Also, this venture did not compete directly with a constituency of the school, but served an educational need as well. This is a simple example, but illustrates the point.

   If a school begins any business venture, there should be a plan that takes into consideration that the venture may fail or that it may have to be terminated due to the political process. This is a mechanism to generate new resources for the school, but is not without risks.

**SUMMARY**

Management of clinical services provides a unique challenge to pharmacy administrators within the academic community. The deans of the schools of pharmacy must be aware of and work with their department chairs and/or associate dean or the individual responsible for the management of clinical services and contracts. It is an issue that is no longer a simple one. It is indeed complex and requires a great deal of imagination, time and effort to be effectively managed.

Administration of schools of pharmacy must come to grips with the changes within the health care system and take advantage of opportunities. The management of clinical service programs as well as educational programs pose a significant challenge. This is true today as we face health reform that college administration utilize the PAR technique, Prepare, Assess and Respond to the challenges facing us.


**References**