Model for Clinical Clerkship Site Development in the Visiting Nurse Association

Christine M. Catney, Christal L Arthur, and Lawrence L. Fleckenstein
College of Pharmacy, The University of Iowa, 115 S. Grand Avenue, Iowa City IA 52242

Joseph M. Scavone
Central Research Division, Pfizer, Inc, Groton CT 06340

This report describes a clerkship which integrated pharmacy student clinical activities into a Visiting Nurse Association (VNA) office and established a mechanism for supervision by off-site preceptors. The procedures for providing drug regimen review, for charting and communicating with other health professionals, and for documenting and tracking these activities are described. The clerkship provided rich opportunities for student growth and pharmacy service development and was successfully managed by off-site preceptors. The procedures constitute a model for extending a preceptor beyond a single clerkship site or for offering a supervised clinical clerkship to non-traditional PharmD students in a distance education program.

INTRODUCTION

A study by Draugalis and colleagues recently reported information about agreements between clerkship sites and colleges that offer a PharmD program. The authors reported a significant increase in the median number of clerkship placements needed by schools since publication of a similar survey in 1993. The number of clerkship placements is likely to continue to increase as more schools implement either entry-level or nontraditional PharmD programs. Furthermore, the pressure to develop new sites will increase as schools modify their curricula to adapt to new ACPE accreditation standards.

As programs change to accommodate more students in advanced clinical clerkships, the same number of faculty or preceptors may be responsible for a larger number of students, and schools will need to find new ways of developing primary care clerkship sites. In the survey results reported by Draugalis and colleagues, an ambulatory care clerkship was found to be required in more than half of the entry-level programs responding. However, sites for these clerkships were identified as difficult to find by 36 percent of respondents.

This pressure is occurring at a time when academic health centers are downsizing and when hospitals of all types are shifting emphasis from inpatient to outpatient care. Managed care organizations are growing. Primary care is being emphasized to a greater extent than in the past in the education of all health care providers. At the same time, pharmacies with distinct pharmaceutical care practice components are developing in the community. These factors may produce a decrease in the number of faculty or preceptors available in the traditional hospital-based sites as well as a shift in focus from acute care to chronic care and to health promotion and disease prevention strategies in the community at large.

The purpose of this report is to describe a set of procedures developed during the implementation of a clinical clerkship in a VNA office. The authors hope to illustrate how implementation of these or similar procedures in other VNA sites could permit the development of clinical clerkship sites with these characteristics:

1. supervision and management of the student by an off-site preceptor;
2. opportunities for students to monitor and assess drug therapy during home visits;
3. possible extension of a single preceptor to more than one site;
4. possibility for a nontraditional PharmD program student to obtain a supervised clinical clerkship experience close to home.

THE VISITING NURSE ASSOCIATION

The Visiting Nurse Association (VNA) is an organization with offices in all 50 states. In Iowa, each of 99 counties is served by a VNA office. Like hospitals and home care pharmacies, the VNA is subject to accreditation by JCAHO. The VNA places a high value on personal individual independence and restoration of health. The primary mission of the Visiting Nurse Association of Johnson County, Iowa is “to improve the quality of life to persons in its service area by assisting individuals and families to achieve the highest level of independent living appropriate to the persons involved.” As the VNA strives to carry out its mission, it provides skilled nursing care, links clients with community services, identifies unmet health needs, and provides health promotion and disease prevention programs.
The VNA employs a variety of health care professionals. At the VNA office that was the site of this clerkship, the staff includes registered nurses, a medical social worker, and nurse practitioners specializing in psychiatry, maternal-child care, and enterostomal therapy. A physical therapist, an occupational therapist, a speech therapist, and a dietitian are available on a part-time basis for referrals. In addition, the VNA provides non-nursing services rendered by home care aides.

In a tradition consistent with its emphasis on independence, wellness, and restoration of health, individuals served by the VNA are referred to as “clients” rather than patients. To maintain consistency within this text, the term, “client” will be used in place of the word, “patient,” throughout this report, except in the phrase, “patient education.” All residents of the service area of a VNA office are regarded as potential clients, irrespective of age, race, gender, ethnicity, religion, sexual preference, or socioeconomic status. The service area of this VNA office extends throughout Johnson County, Iowa, which has a population of approximately 97,000. Most of the clients served are elderly members of the community living independently. Other client groups of significant numbers included persons with AIDS, mothers and their newborns, persons with psychiatric diagnoses, and recently discharged hospital patients who qualify for skilled nursing care.

Services to clients are paid out-of-pocket by clients themselves or by third-party payers, including Medicare and Medicaid. Historically, in some communities, the VNA has been a significant provider of care to the indigent. The VNA site described here has strong ties to community service agencies which may assist the VNA in helping clients meet their needs.

DEVELOPING A NEW ELECTIVE CLERKSHIP

The model presented in this paper resulted from the clerkship experience of a student enrolled in the post-baccalaureate PharmD program at The University of Iowa. The elective clerkship took place during a five week period from January 17, 1996, through February 15, 1996. The Johnson County VNA agreed to host the student and to provide information and opportunities that the student would need to create the experience, including participating in home visits to clients. The VNA agreed to consider hosting future pharmacy students if the clerkship experience was a positive one for VNA staff and if the College of Pharmacy judged the experimental clerkship to be successful. Two pharmacy faculty members (LF and JS) agreed to collaborate as joint preceptors, reviewing and approving projects and monitoring and evaluating the student’s clinical activity. Both the VNA and the preceptors permitted the student a great deal of freedom in designing and implementing the clerkship. This freedom was allowed because the student was a licensed, experienced pharmacist.

As a practicing pharmacist in a community hospital which had a home health care service, the student had observed that home health care nurses frequently telephoned the hospital pharmacy with drug information requests pertaining to complicated drug regimens. This observation resulted in a perception that a home health care agency might have unmet needs for pharmacy services and that identifying these needs and meeting them would be a rich opportunity for both service and learning. Indeed, the student later observed that VNA staff members were routinely challenged to solve clients’ drug-related problems. However, although they could easily identify the pharmacist as a source of drug information, most staff had very limited experience working with pharmacists in a clinical setting or as part of a team.

Two circumstances presented challenges during design of the clerkship and shaped the procedures that were eventually developed. First, the VNA office had no prior experience working with a pharmacist or pharmacy students in the office. The VNA administrators requested that the clerkship be designed to minimize nursing time spent to instruct or supervise the student. Second, neither of the preceptors had a service commitment at the VNA or was able to spend time with the student at the VNA office. All interactions with the student occurred away from the VNA office, at the College of Pharmacy. A system was required that would provide the student with access to the preceptor and would provide the preceptors with a way to supervise and evaluate the student’s work.

Prior to the clerkship, the student visited the VNA office once to learn how it operates on a day-to-day basis. The student sought to understand how a patient is admitted to the VNA system, how care responsibilities are assigned and carried out, and how records are organized and maintained. At the time of this visit, the student also learned that VNA staff were interested in regular chart reviews by a pharmacist and that nurses in the office were eager to identify clients with complicated or problematic drug regimens.

Prior to the clerkship, the student also developed a prototype syllabus which included purposes and goals, learning objectives, instructional methods, projects to be completed during the clerkship, and an instrument for student self-assessment of learning objectives. To determine instructional goals and learning objectives that would be appropriate for this new clerkship, the student searched the pharmacy literature for reported examples of clerkships in the VNA, specifically; home health care settings, in general; and geriatric care. Although no specific VNA clerkship learning objectives had been reported that could be directly utilized in this situation, reports by Francisco, Ried and Vorce-West, Leeds, Penta et al., and Polo et al., were helpful in defining the potential scope of the new clerkship(3-7). In addition, previous work by White and Godwin, Cardoni et al., Kitt, Zuckerman et al., and Zuckerman and Johnson demonstrated the need for and successful implementation of nondistributive pharmacy services within the VNA(8-12).

The prototype materials that were developed and used during the clerkship were based on information found in the literature cited above, the interests of the student, and the preferences of the two preceptors for educational methods for the clerkship. The design of these materials emphasized activities related to drug regimen review, patient education, student self-assessment of learning, and lifelong learning. Goals, purposes, and learning objectives are listed in the Appendix. Many activities were anticipated to be possible during the clerkship, including home visits and opportunities for patient education. To learn the breadth of
clerkship opportunity and the possibilities for future service development, the preceptors gave the student freedom to explore as many learning opportunities as possible. The activities that the student actually experienced are listed in Table 1.

INTEGRATING A STUDENT INTO THE VNA

Critical tasks during the process of planning and implementing the clerkship were conceptualizing appropriate roles and activities for a pharmacist or pharmacy student in this VNA office, and then developing and integrating these activities into daily VNA operations. The seamless integration of pharmacy student activities into the daily work of the VNA was regarded as a major development goal. Achievement of this goal would ensure that future students could enter the VNA clerkship at varying skill development points during the clerkship year and would be able to simultaneously provide a continuous service.

Initial planning was based on the assumption that a student’s clinical activities would be likely to fit at least one of three categories: (i) identifying and resolving drug-related problems during either chart review or home visits, (ii) providing drug information to nurses and to other staff members, and (iii) providing educational interventions directly to clients. The student worked closely with VNA staff to develop a work system to carry out these three activities in a manner that would: (i) facilitate communication with off-site preceptors to enable them to monitor and evaluate the student’s work; (ii) maintain client confidentiality; (iii); use nurses’ time efficiently; (iv) provide a mechanism for tracking the pharmacy student’s activities; (v) result in documentation of pharmacy interventions in a client’s chart; and (vi) establish a mechanism for communicating with nurses, physicians, and other health care providers.

During the five week clerkship, the student designed, tested, and modified forms and procedures. The result was a set of procedures, developed with input from VNA staff, that satisfied the aforementioned requirements and constituted a system for student work which was integrated into the daily operation of the VNA office. The procedures are driven by the primary activity of finding and solving drug-related problems. They address how a student identifies and tracks charts that are reviewed; communicates with physicians, nurses, other VNA staff members, and the preceptor; and documents drug therapy problems, drug information requests, and patient education in the chart.

Together, the procedures have several important characteristics in common. First, they use or are closely modeled upon forms that are part of the client record system in the VNA. Second, a client’s VNA record identification number (the FID#) and a sequence number recorded on a log sheet are used together as a control mechanism to facilitate confidentiality during communications with off-site pharmacy preceptors and to ensure that documents can be matched with the correct chart at a later time. In this way, a student could take forms developed for the clerkship to meetings with preceptors without relying on the client’s name for identification. This system was adopted because it permits the student to communicate information abstracted from the chart to the preceptors while preserving a degree of confidentiality that was acceptable to the VNA administrative staff. Finally, the procedures stipulate that a student may take an action in response to a drug therapy problem or implement a plan of action of any other kind only after approval by the preceptor. In other words, oversight by the preceptor, even at a distance, is built into all procedures that govern a student’s activities.

The service of greatest interest to VNA staff was chart review by the student to detect and resolve drug-related problems. During the clerkship, four groups of clients were readily identified as candidates for chart review. These groups included: (i) individual clients brought to the student’s attention by a VNA staff member. These clients included those having complicated drug regimens or specific patient care problems suspected by the staff member to be associated with drug therapy; (ii) clients receiving drug therapy about which nurses needed information, irrespective of the presence of a problem; (iii) newly admitted clients; and (iv) any client visited in the home by the student.

The procedures require a student to complete a chart review for any request associated with any of these groups of clients as well as any patient education plan prepared for a client. Lists of medications, medical problems, nursing diagnoses, allergies, laboratory data, height and weight, and any other relevant information can be abstracted from the chart and written on a form titled “Visiting Nurse Association Clerkship for PharmD Students Drug Regimen Review Worksheet.”

A second procedure specifies that each drug regimen review, including those associated with development of a patient education plan, must be recorded on a form titled, “Drug Regimen Review Log.” The log serves several functions. First, it serves as a master list for linking student-prepared documents, like the Drug Regimen Review Worksheet described above, with clients’ names. The double number system on the student-generated records (sequence number and FID#) along with the date can be checked against the corresponding set of numbers on the log to reveal the client name. The name and the FID# on the log can then be matched with the correct medical record for reference or for filing.

Second, the log requires the student to categorize the purpose of a review and to identify whether it is associated
with an intervention of some type (“RPh Intervention”). The following specific categories are included on the log: new client, new review, drug information request, patient education provided by the student, and pharmacy intervention. By examining the log, a preceptor can observe the types and relative proportions of a student’s activities, and it can provide VNA staff with the ability to identify charts which have been reviewed by a student or which are associated with a pharmacy intervention.

Procedures and associated forms were developed to describe the primary means of documenting the student’s actions for inclusion in the medical record. During a clerkship in the VNA, a student could be anticipated to write notes summarizing drug information provided to nurses, drug therapy related problems identified during chart reviews or visits with clients, telephone contacts with physicians or community pharmacies, home visits or telephone contacts with clients, medication and allergy histories, patient education provided to clients, and consultations with nurses and other VNA staff. All of these can be documented on a form titled “Visiting Nurse Association Pharmacy Narrative Note” that was modeled upon a form used by nurses to document their own activities and interactions with clients. The procedures specify that the preceptor’s approval be obtained prior to action by the student and prior to adding a note to the medical record.

A procedure pertaining to communication with physicians was also developed to describe how a student would use a two-part no-carbon-required (NCR) form which is usually used in the VNA office by nurses for recording a physician’s telephoned orders. If the student’s contact with a physician results in a change in drug therapy, the student can use the NCR form in the same manner as it is used by VNA staff. That is, a copy would be mailed to the physician for signature and return to the VNA office and a copy would be retained in the medical record until the physician’s copy arrived in the mail. This mechanism could be used only with prior preceptor approval.

Together, these procedures comprise the core of a process for carrying out daily activities during the clerkship that involves continual drug regimen review and drug therapy monitoring by the student. The methods of identifying, documenting, and solving drug-related problems and information needs are complementary to forms and procedures which are routine aspects of daily work in the VNA. Their simplicity lends itself to seamless transfer of service responsibility between students completing and beginning a clerkship cycle, and they comprise a portable system that could be implemented at other VNA offices.

DISCUSSION
The student’s time at the site was based on an 8:00 AM to 5:00 PM Monday through Friday schedule. However, to be available to participate in as many different experiences as possible, the student’s activities were planned several days to a week in advance and changed on a daily basis. Typically, accompanying a VNA staff member on home visits to clients required an entire morning or afternoon and involved visits with several clients. Likewise, participation in blood pressure screening clinics at the local senior center involved entire mornings. When the student’s schedule placed her at the VNA office, time was devoted to reviewing charts, responding to drug information requests, completing paperwork, consulting with VNA staff, and carrying out activities related to clerkship development. Meetings with the preceptors occurred two to three times each week at the College of Pharmacy building on the main campus and were scheduled at times that were compatible with the preceptors’ other daily responsibilities and the student’s schedule at the site. During the five week clerkship, the student’s time was distributed approximately as follows: chart reviews, 25 percent; home visits to clients, 15 percent; participation in brown bag reviews and screening clinics, 10 percent; meetings with preceptors, 10 percent; consultations with VNA staff and responding to drug information requests, 15 percent; clerkship and project development, orientation to the site, and miscellaneous activities, 25 percent. This mix of activities was due to the student’s involvement in clerkship development, such as creating procedures, and to participation in some activities for the first time, such as the screening clinics, toward the end of the clerkship. Both the student and the preceptors anticipated that the mix and relative proportions of activities would evolve to allow future students to spend more time in direct clinical activities. For example, future students could be scheduled to participate in home visits, brown bag reviews, and screening clinics earlier in the clerkship.

Both faculty members had extensive experience precepting students. Each preceptor evaluated the student independently according to criteria that each had developed during years of interactions with clerkship students. Conversations and regular meetings with the student, projects and examples of written work related to drug regimen review, medication histories, and patient education, and contacts with staff at the VNA office for information and feedback about the student’s work or interactions with clients and staff formed the basis for the preceptors’ evaluations of the clinical component of the student’s experience. Because the clerkship was under development and because physicians interact with all VNA staff from a distance, primarily by telephone, neither perceptions of the clerkship nor evaluations of the student were solicited from physicians.

In addition, the student developed a personal self-assessment document which was shared with the preceptors at the end of the clerkship. In this document the student described her attainment of each of the learning objectives at one of five levels of mastery: identification, basic, active, advanced, or teaching mastery.

Both student and preceptors learned that the VNA offers excellent learning opportunities for pharmacy students. These include interdisciplinary collaboration with a variety of health care professionals, opportunities to visit clients in the home for drug therapy assessment and monitoring, provision of drug information or educational programs to VNA professional staff, home care aides, or members of the community, design and implementation of health promotion and drug therapy educational interventions customized for and delivered to clients over a period of time, and, finally, the opportunity to observe and participate in community-based health promotion programs and services. In addition, a VNA office in a community like Iowa City, Iowa, in which colleges of dentistry, medicine, nursing, and social work also educate students, has the potential to be a site for developing student interdisciplinary team projects.

Implementation of a set of procedures for integrating a student into the work of a VNA office, like the procedures described in this report, can permit the development of a
clinical clerkship in the VNA with low faculty involvement at the site. A faculty member located on a college campus could conceivably interact with a student or students completing a VNA clerkship at a distant site and simultaneously meet other service, teaching, and research responsibilities on campus. Although the meetings between preceptors and student in the clerkship described in this report occurred face-to-face with a frequency of two to three meetings each week, the provisions for confidentiality in the procedures and documents could permit e-mail or facsimile transmissions to facilitate communication between student and preceptor. The wide geographic distribution of the VNA increases its attractiveness as a potential site for licensed pharmacists enrolled in nontraditional PharmD programs to participate in clinical clerkships that can be supervised from a distance. The VNA has a strong tradition of client advocacy within the community as well as involvement in community health promotion activities, programs, and clinics. Pharmacy student involvement in these activities could result not only in valuable experiences for student learning, but also opportunities both for research and for expansion of services. The health promotion and screening clinics that are typical VNA services can provide models for pharmacy students to learn how these services can be implemented and managed, especially in areas where community pharmacies have not yet developed similar services and relationships with the community.

The type of clerkship described here—one which would be supervised and managed from a distance—raises many important issues. Among these are questions pertaining to client confidentiality, professional liability, appropriate assessment of students, the optimal relationship between the faculty member and the site, the ideal amount of face-to-face interaction between student and preceptor required for effective supervision, and the potential for error resulting from use of the procedures reported here. The authors recognize that a preceptor’s direct modeling of a pharmacist’s role and immediate feedback in response to a student’s performance are important components of a successful educational experience. However, the authors’ believe that some of these issues can be resolved with careful selection of students, meticulous planning, and openness to communication in a variety of electronic media.

Although the student described in this report was enrolled full-time in an on-campus program, she was a licensed, experienced pharmacist who also fit the profile of a student who might be enrolled in a nontraditional PharmD program. For this reason, in view of the limited experience described, the authors would suggest this type of clerkship only for a group of similar, highly-motivated students who have a well-formed conception of the pharmacist’s role in the VNA setting.

The clerkship experience reported here was judged to be successful by student, preceptors, and VNA staff. The student found this clerkship experience to be the richest source of learning opportunities experienced during a series of nine clerkships. The opportunity to interact with clients in their homes, away from institutional settings in which health care providers typically exert great control over an individual, is a powerful learning experience even for a student with practice experience. In her self-assessment of patient education skills the student reflected, “The VNA clients taught me the importance of being able to focus teaching on small, discrete goals that are easily attainable for the client.” The opportunity to develop a customized patient education plan, to deliver it, and to assess its outcomes in a client’s own milieu was a rare activity during other clerkships in which the student participated.

The preceptors evaluated their experiences with off-site supervision positively and expressed a willingness to precept future students in this manner. Both preceptors recognized that successful implementation of this model could permit a single faculty member to precept students at more than one clerkship site.

The VNA staff found the student’s activities to be a valuable contribution to the care of clients and encouraged development of the procedures reported here. Clerkship design met all VNA expectations for maintaining confidentiality and for efficient use of nursing time. Although the student’s activities were not incorporated into VNA quality assurance (QA) audit procedures, the format of the Drug Regimen Review Log facilitated locating charts associated with pharmacy interventions or reviewed for specific purposes, and the VNA staff expressed interest in eventually developing QA procedures that would include pharmacy students’ activities. Both the VNA staff and the College of Pharmacy expressed interest in continuing the collaboration and placing additional students in the site in the same clerkship format. However, both the student and VNA staff agreed that a student’s experience would be enhanced by pairing the student with a VNA staff member for home visits on a consistent schedule and by involving a student in clinic experiences earlier in the clerkship.

CONCLUSION

The authors describe their experience with the hope that programs that are seeking novel ways of expanding clerkship sites may benefit from this experience. The maturity level of the student, the ability of the faculty member to effectively provide supervision under the circumstances described here, and the need for careful, intense planning in collaboration with VNA staff are critical factors which must be carefully considered prior to implementing a clerkship like the one described here. However, the rewards for the student are great, and a successful implementation of a clerkship which is consistently and effectively managed by an off-site preceptor can expand the capability and flexibility of a program to provide clerkship sites.

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References


APPENDIX. CLERKSHIP GOALS AND LEARNING OBJECTIVES

Clerkship Purposes and Instructional Goals

1. To provide the student with a conceptual framework for pharmaceutical care in the home care setting.
2. To guide the student’s acquisition of specific knowledge related to drug therapy in the population(s) served by the home health care agency.
3. To observe and to shape student performance in carrying out drug regimen review and monitoring.
4. To expose students to a model of interdisciplinary cooperation in patient care.
5. To facilitate student development in the affective domain of patient care.
6. To permit the student to identify areas of interest for future professional development.
7. To permit the student to gain an understanding of the patient education process and to provide patient education.

Learning Objectives

As a result of participating in this clerkship, the student will be able to:

1. Define home health care and relate it to the larger health care system in the community.
2. Demonstrate increased knowledge in five subject areas chosen by the student from a list approved by the preceptor. These subject areas may include general topics related to home health care and specific topics related to disease states, drug therapies, or population groups served by the home health care agency or to any of the learning objectives required for this clerkship.
3. Analyze, any patient, disease state(s), and drug regimen triad selected by the preceptor and describe or predict pharmacokinetic and pharmacodynamic variations.
4. Apply a model for drug regimen review to home health agency clients’ medication profiles that includes assessment of the following elements:
   a. Correlation between drug therapy and medical problems
   b. Appropriate drug selection
   c. Drug regimen-doses, routes, dosage forms, schedules, and length of therapy
   d. Therapeutic duplication
   e. Drug allergy or intolerance
   f. Adverse drug events
   g. Drug-drug, drug-disease, drug-nutrient, and drug laboratory test interactions,
   h. Social, recreational, and over-the-counter drug use, including alternative therapies
   i. Failure to receive drug therapy
   j. Financial impact
   k. Patient knowledge of drug therapy
5. Prepare a plan for communicating and managing drug therapy problems, including patient compliance problems or barriers to compliance. A written plan must
   a. Rank-order problems with respect to clinical significance
   b. Specify
      i. problems which need to be communicated to prescribers and/or caregivers
      ii. how these problems will be communicated
      iii. suggestions for alternative medications or treatments when appropriate
      iv. steps to manage each problem
6. Write a drug therapy consultation that is evaluated as “effective” by the preceptor.
7. Design a plan to meet a patient education need that includes assessment of each of the following elements
   a. Memory and general mental state
   b. Sensory changes
   c. Learning disabilities
   d. Physical limitations
   e. Cultural, ethnic, religious, and economic factors affecting compliance
8. Synthesize a monitoring plan for any patient, disease state(s), and drug regimen triad selected by the preceptor including identification of
   a. Optimal variables to monitor
   b. Frequency of monitoring
   c. Appropriate therapeutic endpoints
   d. Decision points for altering therapy or monitoring plan, including attainment of the therapeutic endpoints or occurrence of adverse drug effects