A medical student logbook that was developed by the Department of Surgery at Southern Illinois University School of Medicine to improve the clerkship is described. Specific objectives of the logbook were: (1) to reinforce student habits to systematically record relevant data concerning patients for purposes of future recall and reference; (2) to serve as a stimulus for discussion in lecture rounds and in sessions between the student and his preceptor; and (3) provide a medium for collecting data on the students and their daily activities. Students routinely record their daily activities on preprinted pages. Quality control is maintained through weekly reviews by designated faculty and students' preceptors. Once reviewed, the data are entered into a computer in time for midterm and final student evaluations. Output reports indicate availability and frequency of student participation in activities, both individually and as a group. This information is especially useful at mid-evaluation, since it highlights student experience voids in time to resolve them within the second half of the clerkship. Scheduling during the clerkship is planned to provide a sufficient number and variety of patient management experiences. A continual assessment of student activities is crucial to measuring curriculum goal attainment. The logbook provides quantitative data on the activities of students and the type of clinical skills that each student observes, performs, or assists with during the clerkship. It also indicates the number of patients worked up and followed through surgery and whether each student has had adequate experience in conducting histories and physicals and in making oral or written case presentations. (SW)
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A MEDICAL STUDENT LOGBOOK FOR STREAMLINING COLLECTION OF CLERKSHIP EVALUATION DATA

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ABSTRACT

Objectively evaluating a ten-week surgery curriculum, mainly comprised of numerous learning activities in a busy hospital environment is difficult. The goal of the program is to introduce third-year medical students to the basic concepts of the major surgical specialties, and is accomplished by engaging students in a balanced array of pertinent learning activities. This type of curriculum, dependent on external factors (number of patient admissions, types of operations conducted, clinical procedures requested, etc.), requires highly efficient and coordinated scheduling. Scheduling is planned so as to provide a sufficient number and variety of patient management experiences to each student during the surgery clerkship. A continual assessment of student activities is crucial to measuring curriculum goal attainment.

Student logbooks were developed to answer these information needs, and have significantly obviated data collection difficulties. Students routinely record their daily activities on pre-printed pages. Quality control is maintained through weekly reviews by designated faculty and students' preceptors. Once reviewed, the data is entered into a computer in time for midterm and final student evaluations. Output reports indicate availability and frequency of student participation in activities, both individually and as a group. This information is especially useful at mid-evaluation, for it highlights student experience voids in time to resolve them within the second half of the clerkship.
Introduction

Evaluating the adequacy of learning experiences in a surgery clerkship curriculum for third-year medical students is difficult due to the complexities of its organizational structure. Because many surgeons typically find bedside teaching in undergraduate surgery to be an effective approach (Clark, 1975; Dudley, 1970), students spend the majority of their time actively involved in patient care. Learning activities are therefore somewhat reliant on such uncontrollable factors as patient availability and variety. However, demands for accountability heard in both education and health occur with no less fervor in medical education (Garrard, Keyes, & Verky, 1978).

Evaluation efforts in clinical education are even further complicated by the diversity of clinical skills and knowledge that must be acquired in the complex and fast-paced setting of a hospital (Reynolds & Chanel, 1979). Clerks are generally scattered throughout the hospital engaged in various activities such as patient evaluation, pre- and postoperative management, trauma and emergency management, clinical skill experience and operative experience, outpatient management, and diagnosis and management of fundamental surgical diseases. Each of these is a necessary activity to achieve the curricular objectives deemed important by the Department of Surgery at Southern Illinois University School of Medicine. It is part of this clerkship's charges to expose third-year students to each of the major surgical disciplines within a ten-week period. This calls for highly organized and scheduled logistics and careful monitoring to ensure a balanced array of experiences for each student within the designated time period. These needs gave way to a new computerized information system which provides assessment data on the type and frequency of student learning activities.
Method

Students are provided a pre-printed logbook with completion instructions the first day of the clerkship. The logbook was designed to serve several purposes:

1. It reinforces student habits to systematically record relevant data concerning one's patients for future recall and reference.
2. It serves as a stimulus for discussion in lecture rounds and in sessions between the student and his preceptor.
3. It is used as a medium for collecting data on the student and her daily activities.

Students carry their logbooks regardless of what activities they are involved in. The log provides for recording pertinent patient information; the type of history/physical examination performed; the frequency of orders and progress notes written; type of clinical skills observed, assisted with, or performed; and whether or not an operation was observed, the workup reviewed, or the case presented formally. It is also designed for recording experiences with anesthesia, cases requiring psychosocial assessment, and outpatient encounters.

The logbooks are reviewed weekly for completeness and accuracy by a Nurse Instructor. One Nurse Instructor is based at each of the two school affiliated hospitals and is responsible for teaching the clerks clinical skills, making patient and surgery assignments, and monitoring student activities throughout the clerkship.

The logbooks are collected in the middle and at the end of each clerkship. Various computerized reports are produced summarizing selected data elements.

Results

The mid-clerkship reports provide a detailed account of what each student has accomplished and which experiences the student is deficient in. Efforts are then made to resolve these voids prior to the end of the clerkship.
The final computerized reports provide a global perspective of the student as well as group comparison information. These reports include:

Student Workup Summary
The primary purpose of this report is to determine whether each student has had adequate experience in conducting histories and physicals, writing orders and progress notes, and making formal case presentations. It reflects data for analyzing the frequency, type (oral or written), and major source (attending or resident) of workup reviews. The differences in the above criteria between hospitals where the two groups of clerks are based are also detectable from this report.

Surgical Discipline Summary
This report indicates by surgical specialty the number of patients worked up, the number of patients worked up and followed through to surgery, and the number of operations observed without having had worked up the patient. The Department of Surgery at Southern Illinois University School of Medicine uses a multidisciplinary approach and seeks a balanced exposure to each subspecialty. This report aids in detecting those disciplines a student has had adequate or inadequate exposures to.

Clinical Skills Summary
This report is used to analyze the frequency and type of surgically related clinical skills that each student observes, performs, or assists with during the 10-week clerkship. This information is also used to assess the availability of clinical situations where students can practice these clinical skills. It has already been noticed, for example, that students were not getting sufficient experience in cast and splint applications. Plaster arms were developed so students could apply these skills on occasions when patients were unavailable.
A Student Logbook

Anesthesiology Report

The purpose of this report is to evaluate the types of experiences each student had during their one-week assignment in anesthesia. It summarizes the methods and procedures attempted or achieved while working in the Department of Anesthesiology.

Faculty-Patient Report

This report reflects the number and type of patients full and part-time physician faculty provide for the students. It is used in planning future clerkships based on calculated averages of the number of patients by specialty which can be expected from each physician faculty member. This information provides factual justification for hiring additional faculty in order to have an adequate number of patients representing each surgical specialty available to the students.

Discussion

The student maintained logbooks have proven to be an effective means for streamlining collection of clerkship evaluation data. The accuracy of the reports makes for informed decision-making concerning the clerkship resources and student activities. Without such an information bank, faculty could not guarantee that program input was sufficient to meet the clerkship goals and objectives.

The logbook reports currently provide quantitative frequency data. Consideration needs to be given for incorporating qualitative data so students can be assessed as to the level of performance or proficiency achieved. Such measures could provide written feedback to students on how they performed in the various learning activities. Currently, feedback is generally verbal coupled with examination and written overall student evaluations. Qualitative performance feedback on student activities could contribute to conducting a process evaluation of the surgery clerkship, and eventually product or results assessment.
References


