

# Documentation of Inpatient Clinical Experience of Family Practice Residents: A Manual System

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A simple, efficient, and inexpensive system for quantitatively documenting the range of clinical experience of individual residents on inpatient rotations is described. Information provided by this system can be used by program faculty to make informed educational decisions concerning both the design of rotations and individual resident program planning. The data are also useful to residency graduates to document their clinical experience when applying for hospital privileges.

The Millis report identified the need for developing increased numbers of primary physicians.<sup>1</sup> One response to this educational mandate has been the development of family practice residencies with the "model clinic" or "family medical center" central to the educational program.<sup>2</sup> With the basic parameters outlined by accreditation requirements, considerable effort and attention have been given to developing the model clinic as a reasonably high-fidelity simulation of "real world" practice.

The nature of the appropriate inpatient experience for family practice residents is only beginning to receive attention.<sup>3-6</sup> Most family practice residencies have adapted existing internship or PG-1 rotations in the major medical specialties to their educational programs for family practice residents, or have assigned family practice residents to the other departments for these rotations. This may make it difficult for the family practice program to determine, or to monitor in any detail, the inpatient clinical experience of its own residents. This difficulty is compounded with community

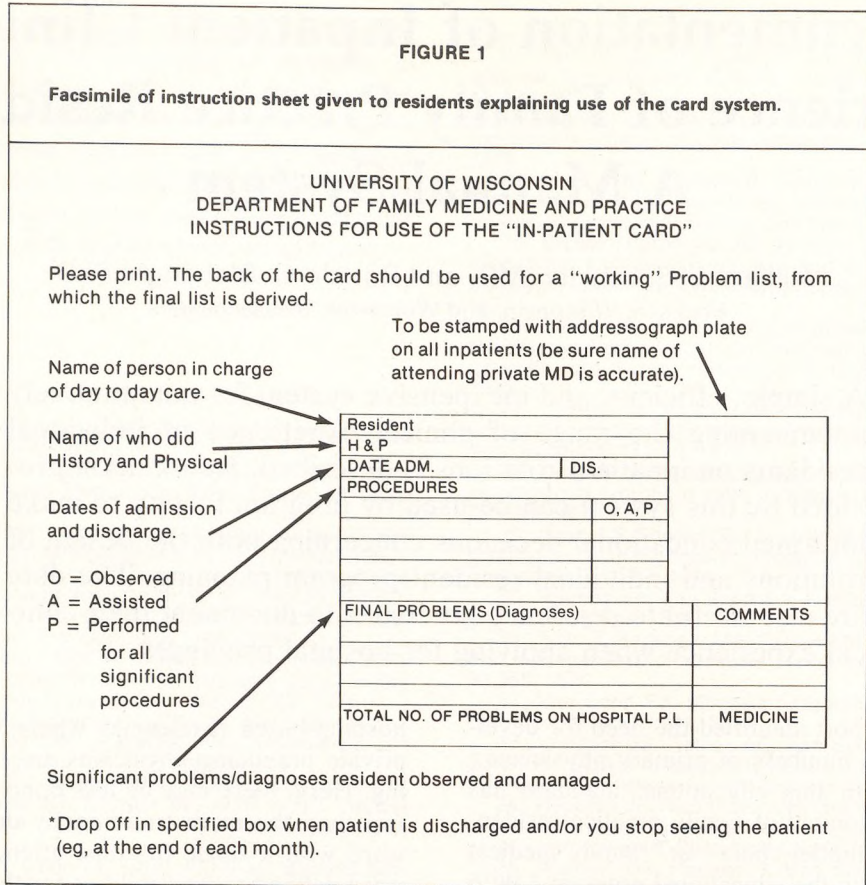
hospital-based residencies where the patients of private practicing physicians are used for teaching. Here, there may be less opportunity for control than the more traditionally defined teaching ward with a single full-time attending physician, ward defined responsibilities for the resident, and a more uniform patient census.

Residency directors need enough information about the range of clinical material available on a given rotation to plan for accomplishing training objectives. When this information is available for each resident, it may be used to tailor individual resident schedules to individual educational needs. This paper describes the development and use of a system for accomplishing this task.

The system was developed by the University of Wisconsin Department of Family Medicine and Practice in April 1974, and has been in continuous use since then. It has subsequently been adopted by all four of the community hospital residencies affiliated with the department. The card system requires minimal effort on the part of the resident, is comprehensive, inexpensive, and enjoys high compliance. The data collected provide a quantitative description of the clinical experience of each individual resident, as well as a picture of the patient problems seen on each rotation. The system is described here in enough detail to be implemented by others who may be interested in

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using it. Following the description of the system, the three primary uses for the data it provides are discussed: (1) educational planning for the residency, (2) individual resident program planning, and (3) documentation of the individual resident's clinical experience in order to obtain hospital privileges following graduation.

**Description of the System**

Most physicians in practice keep track of their hospitalized patients in one or more of three ways: (1) on a small file card supplied to them by the hospital admission office when the patient enters the hospital; (2) in a small calendar or notebook which they carry with them; (3) in some type of billing notebook using the hospital addressograph plate. Residents frequently use pocket cards or a list to keep track of patients under their care. Two goals in developing this system were to make the card for collecting the data as similar to what residents already employed and as useful in the day-to-day work of the residents as possible.

Figure 1 reproduces the instruction sheet given

residents which includes a facsimile of the card used for the internal medicine rotation.\* The information requested on the card varies somewhat with the service, as can be seen in Figure 2. Procedures most frequently encountered on a particular service are printed on the card and the resident indicates exposure to the procedure only by writing O, A, or P to indicate level of involvement (Observed, Assisted, Performed). The cards are printed on standard 80 column IBM cards with a mimeograph machine and trimmed down to a 3 x 5 inch pocket size with a paper cutter. The IBM cards are available in different colors and each service was assigned a different color. The back of the card is left blank for the resident to keep day-to-day patient management notes.

The addressograph plate provides the name (sex), hospital number, and age of the patient and the name of the attending physician. The cards are distributed from and returned to a central office

\*For the sake of simplicity, the use of the system is described mostly in terms of its application to internal medicine.

FIGURE 2

Facsimile of the cards used for each service, indicated in the lower right hand corner (the card for Medicine is shown in Figure 1). The card for each service has a different color. The back side of the card is blank and is used by the residents for notes about each patient.

Resident H&P Attending Chief Complaint Final Problems—Diagnoses Procedures Disposition Home Transfer		Patient Age Date Male Female Time O.A.P. Comments Admit Died ER		Resident H&P Date Adm Dis. Procedures O.A.P. Final Problems (Diagnoses) Male Female Comments Total # of Problems on Hospital P.L. PEDIATRICS	
Resident H&P Date Adm Dis Present At Del Delivery NBD Forceps Breech C-Section Male Female Complications Episiotomy Pudendal Block Paracervical Block Pitocin Induction Amniotomy Other OB—GYN		Resident H&P Date Adm Dis Final Problems—Diagnoses Procedures O.A.P. Comments Total # of Problems on Hospital P.L. SURGERY			

each calendar month when the resident's assignment changes. At the end of each month, they are summarized as shown in Figure 3 (for internal medicine).

The summary of the data from the cards includes the age, sex, and medical problems represented by the patients seen by the resident that month. The number of histories and physical examinations the resident has done are also recorded.\* Procedures with which the resident has had experience are enumerated and the degree of involvement indicated (observed, assisted, or performed). The frequency of disease categories in the H-ICDA category system is recorded on a standard H-ICDA outline and attached to the summary (Figure 4).

A copy of each month's summary (Figures 3 and 4) is placed in the resident's permanent evaluation file, a copy is given to the resident, and a copy is sent to the full-time family practice faculty member responsible for the coordination of that service. The statistical summary of the card data was done by a secretary and required 30 to 60 minutes, in which time she was able to summarize

the one-month experience of four residents (approximately 120 patients). The disease-problem summary may be done either by the resident or by a medical records administrator in the department. Summing the data for each resident indicates the total scope and activity of the rotation for that month, quantitating the number and types of patients admitted by the volunteer private attendings. Both of these factors may vary more unpredictably in a community hospital-based program than a university hospital teaching ward.

The information provided by the system makes it possible to judge whether the available patients are adequate for accomplishing the objectives of each rotation. Evaluation of any given resident's exposure to a proper breadth of both patient problems and technical procedures also becomes possible. In this manner, specific changes have been made in rotation design as well as correction of under-represented categories of inpatient exposure of a given resident by assignment to a particular attending who regularly admits patients with the desired kinds of clinical problems.

Resident cooperation in using the cards has been virtually 100 percent, probably because of the simplicity of the system and its substitution for a similar system already used by most residents. Noncompulsive residents require some encour-

\*Sometimes histories and physical examinations are done on admission when the resident is on call for a colleague and the patient is not followed, and conversely the resident may manage a patient for whom he has not done the admission history and physical examination.



**FIGURE 4**  
**DISEASE CATEGORIES H-ICDA**

<b>I INFECTIVE AND PARASITIC</b>	
Sepsis - 1	
Herpes Zoster - 1	Gram Negative Sepsis - 2
<b>II NEOPLASMS</b>	
Cancer, Cecum - 1	Cancer, Thyroid - 1
Metastatic Disease - 1	Leukemia - 1
Rectal Cancer - 1	Cancer, Lung - 1
Histiocytic Lymphoma - 1	Multiple Myeloma - 1
<b>III ENDOCRINE AND METABOLIC</b>	
Adult Diabetes Mellitus - 1	Hypothyroidism - 1
Gout - 1	
<b>IV BLOOD AND BLOOD-FORMING ORGANS</b>	
Anemia - 1	
<b>V MENTAL DISORDERS</b>	
Disoriented - 1	
Chronic brain syndrome - 1	Depression - 1
<b>VI NERVOUS SYSTEM AND SENSE ORGANS</b>	
Parkinson's disease - 1	
Hydrocephalic - 1	Blindness - 1
<b>VII CIRCULATORY SYSTEM</b>	
CHF - 1	Hypertension - 4
Venous stasis ulcers - 1	Thrombophlebitis - 1
TIA - 1	Arrhythmias - 1
Inferior wall M.I. - 1	Hypotension - 1
Myocardial Ischemia - 2	CVA - 1
MI - 1	
<b>VIII RESPIRATORY SYSTEM</b>	
Respiratory distress syndrome, adult - 4	
COPD - 3	Pneumonia, staph - 2
Pneumonia - 7	Respiratory arrest - 1
<b>IX DIGESTIVE SYSTEM</b>	
Cholecystitis - 2	Biliary tract disease - 1
Esophagitis - 1	Acute Ileus - 1
G.I. Bleeding - 2	
<b>X GENITOURINARY SYSTEM</b>	
Renal Calculus - 1	UTI - 1
<b>XI DELIVERY AND COMPLICATIONS OF PREGNANCY</b>	
<b>XII SKIN AND SUBCUTANEOUS TISSUE</b>	
Cellulitis, leg - 1	
<b>XIII MUSCULOSKELETAL AND CONNECTIVE TISSUE</b>	
<b>XIV CONGENITAL ABNORMALITIES</b>	
<b>XVII INJURIES AND ADVERSE EFFECTS</b>	
Injured knee - 1	Adverse effect of radiation therapy - 1
Fractured hip - 1	
	Rule out - Stroke - 1

alternative methods of collecting this same data using a specially designed computer program or the computer data generated by the hospital record department have been explored. Each of these automated systems appeared to require more personnel time, and/or more expense, with a sacrifice of some of the information presently collected.\*

## Use of the System

### Program Planning

The aggregated data describe the clinical material available on the rotation. While the number and kind of patients admitted in a given month by a given attending varies uncontrollably, general tendencies can be identified and the average number of admissions per month has been calculated for each attending physician. The availability of data concerning the kind of medical problems each attending tends to admit is used to try to standardize each resident's experience. Attending physicians found to admit a low number of patients per month may be grouped with other attending physicians to ensure an adequate experience for the resident. Attending physicians may be dropped from the teaching service if their admissions are inadequate in number or kind relative to program objectives. The rotational teams of residents and attending physicians are constructed so as to approximately equalize the numbers of patients per month each resident manages and to meet the month's or service's educational objectives.

### Individual Resident Program Planning

Information provided by this system is used by faculty advisors to help determine individual resident programs. Toward the end of the first year, each resident reviews his/her file to date with a faculty advisor. The file includes evaluations of clinical performance by various attending physicians, some measures of clinical experience prior to beginning the residency, an expression of his/her own individual goals and interests, and the quantitative description of the inpatient clinical experience provided by the cards. This process has led to individual resident schedules more suited to the indicated educational need of the resident. For example, if the particular resident's

\*The computerized outpatient billing system is used to document each resident's Family Medical Center experience.

pediatric experience is found to be deficient in terms of the total number of patients managed and/or the range of diagnoses represented, additional pediatric experience is arranged. If the internal medicine rotation did not provide sufficient experience with a particular clinical problem, assignments can be made to remedy the deficiency. Thus, the department is able to increase its degree of assurance that residents are adequately prepared for practice.

### Hospital Privileges Following Graduation

A current important issue in family practice education relates to gaining hospital privileges consistent with the training experience of the residency graduates.<sup>3,6-8</sup> The most frequently suggested strategy for accomplishing this is the documentation of the nature and extent of the clinical experience during the residency. The system described here provides the resident with this information.

## Conclusion

While this system was developed in response to a need of family practice residencies which must necessarily rely heavily on rotational assignments on other services, it could easily be used by training programs in other specialties. It would seem particularly suited to flexible internship programs where rotations in several specialty areas are typical.

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