The "E-Box": An Inexpensive Modification of Diagnostic Indexing

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The diagnostic indexing system developed by Eimerl in England several years ago has attracted wide interest among primary care physicians in a number of countries. One limitation to its more extensive use in training programs has been the cost of the E-book itself. This paper describes an inexpensive modification of the E-book system involving the "E-box." This method is a valuable learning tool and provides a simple system for monitoring the clinical experience of students and residents in family practice.

Since the introduction of the Eimerl[1] diagnostic indexing system into the United States through the efforts of Metcalfe, Wood, and others, its use in family medicine residency training programs has become widespread. The code was originally designed for the Royal College of General Practitioners, and was modified by the World Organization of National Colleges, Academies, and Academic Associations of General Practitioners/Family Physicians (WONCA). The code was standardized as the International Classification of Health Problems in Primary Care (ICHPPC) at the General Assembly of WONCA in November 1974, at Mexico City. The code was constructed so as to be compatible with the International Classification of Disease, but it is less detailed and is specifically designed for the coding of common problems encountered in primary care.

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Some residency training programs have required or encouraged their residents to keep individual E-books, and in a few schools this opportunity has been offered to undergraduate students. A deterrent to the more extensive use of this valuable learning tool has been the expense of the E-book itself, which has been steadily mounting through the years. We have devised an inexpensive modification which may be of especial value to those involved in undergraduate educational programs.

Little is known about the actual content of clinical experience which the medical student receives during his clinical years, although those of us in the field of family medicine suspect that it is composed of a disproportionate number of zebras which sometimes outnumber the horses. It is in an effort to gather solid data on clinical experience in medical school that we are now distributing diagnostic indexing materials to our undergraduates. The low cost of the E-box makes it possible for us to do this at no cost to the student and little expense to the program.

The Materials

The E-book is an elegantly complete, multiple-ring binder provided with indexing for each of the rubrics of the R.C.G.P. Code. Its comprehensiveness makes it not only expensive, but somewhat cumbersome, and our first approach to the problem was to eliminate all prior indexing and to establish a system where only those disease entities actually encountered would be represented by a data sheet in the file. Our modification of the system consists of an "E-box," containing index guides which are numbered at intervals of 25, from zero through 950 (Figure 1). These guides may be inexpensively prepared by photo-offset printing of the numerals on "Pres-A-ply" labels; the labels are cut apart by the students and applied to blank index guides. The student is also supplied with loose data sheets on which patient information is to be recorded (Figure 2). Each sheet has space for the code number of that problem, and the sheets are filed numerically in the box. The student is also provided with a standardized ICHPPC code book, a convenience list of most frequently used index numbers, and a list of the "50 Most Common" problems encountered in ambulatory practice.[2]

The Method

The data sheets are initially used to record the name of each patient, his social security number and year of birth, the condition for which the patient is seen, and any other information in which the student is interested. It is not necessary to use data sheets for this purpose, but it is convenient to do so. At the end of the day, or at weekly intervals, this information is transcribed onto separate data sheets which are coded with the number of the appropriate problem. New data sheets are made out for each new problem not previously encountered, or the patient's name is added to a data sheet previously indexed. The front of the data sheets are printed in black, and are used for recording male patients; the backs are printed in red, and are used for recording female patients. This system makes it easier to tabulate results later.

A wide space at the right of the data sheet is provided for whatever information the student wishes to record, such as hospital chart number or the place where the patient was seen. When index numbers refer to a rubric

beginning "Other diseases of . . ." the specific diagnosis should be recorded here.

At times patients will be seen who have several problems, and their names will, therefore, be entered on several of the indexed data sheets. Some students find it helpful in such cases to cross-index the problem code numbers under which the patient's name will be found.

The two columns marked "A" and "B" under "Code" are provided for specific research projects, either projects undertaken by the program or those designed by the student. At the present time, we are interested in determining the actual clinical experience of as many medical students as possible, and we are asking our students to use column "A" to check those patients with whom they *actively* participated in some part of the clinical management. Patients listed without a check in this column are those who were presented in clinical demonstrations and other patients in whose care the student did not actively participate.

Other programs may wish to use these columns for different purposes, such as noting if a family history of the same illness was present, if the patient had been previously hospitalized for this illness, etc, or they may wish to modify the data sheet in other ways according to their own needs.

In the example shown in Figure 2, two patients with hypertension were seen on February 14. Mr. Doe was cared for by the student in the outpatient department; Mr. Smith, an elderly man who also has diabetes, a urinary tract infection, and angina, was presented by someone else to Dr. Jones at grand rounds.

After each name collected for the period has been transcribed to the appropriate problem sheet, the sheets are filed numerically, using the index cards for convenience in locating them. Subsequent patients with the same condition are filed on the same sheet until it is filled, and then an additional sheet is begun and stapled to the first. An index guide marked "Doubtful" is provided so that the student may file clinical problems whose proper classification is not clear. Upon periodic review with the preceptor, these classification problems can be resolved.

We ask that students review their files with us at the end of each school year in order that we may record the scope of their clinical experience on a tally sheet (Figure 3). This information is then entered into a computer, from which the information can be printed out in any form desired. It may be helpful, for example, to compare the student's experience with a programmed list of the 50 most common primary care problems. The student may be interested in knowing in what proportion of the patients seen he is participating in actual delivery of care. Many other ways in which to analyze the data come readily to mind. This periodic review enables the student to assess the status of his clinical experience, to discover areas in which it is deficient, and to direct his educational course so as to supplement these deficiencies.

We hope that others who are interested in evaluating the clinical exposure of undergraduate students may find this method of value.

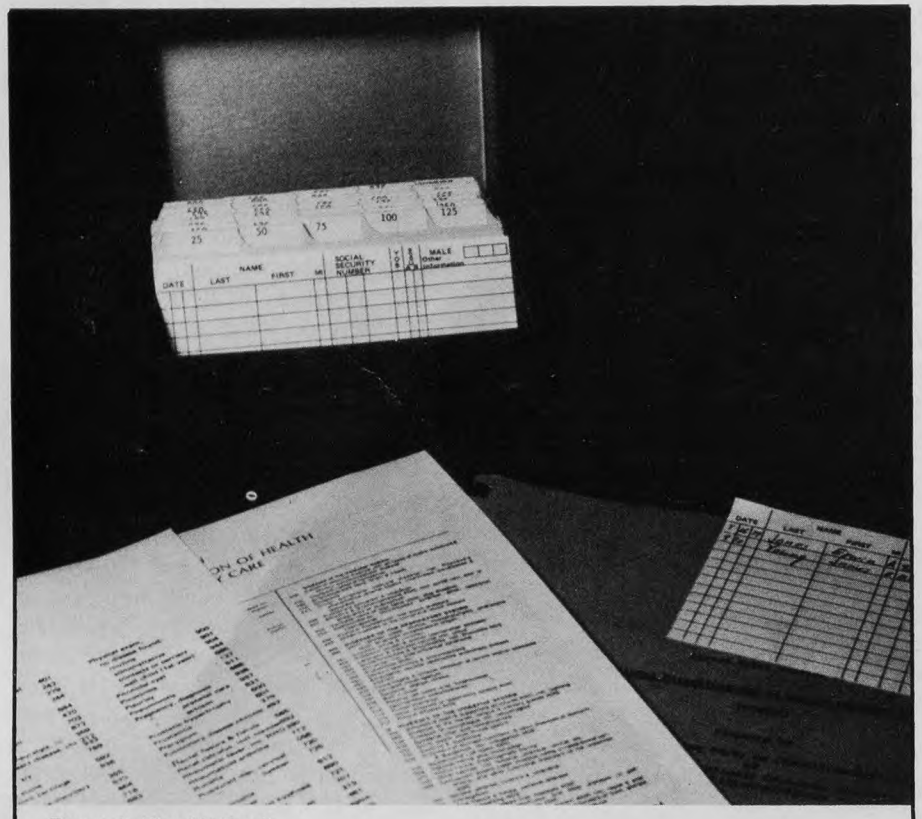

Figure 1. The "E-Box"

DATE			NAME LAST	NAME FIRST	MI	SOCIAL SECURITY NUMBER			YOB	Code A	Code B	MALE 4 0 1 Other Information
2	14	75	Doe	James	D	201	06	4792	19	✓		OPD
2	14	75	Smith	Steve	-	389	75	1246	05			Grand Rounds-
			also 250-595-		4/12							Dr. Jones

Figure 2. Data Sheets for Patient Information

References

1. Eimerl TS, Laidlaw AJ: Research in General Practice. London, E & S Livingstone, Ltd, 1969
2. Baker C: What's different about family medicine? J Med Educ 49:229-235, 1974

E-BOX TABULATION FORM

Student Peter Johnson Training level 2 Date of tabulation 6/17/75

Clinical clerkships completed: All

Clinical electives completed (by course number): Med 201

P/250	Male	Female
A		1
B	1	
None	2	

P/277	Male	Female
A	4	6
B		
None		

P/300	Male	Female
A		2
B	1	
None		3

P/401	Male	Female
A	1	2
B		
None	1	

P/410	Male	Female
A	1	
B		
None		

P/412	Male	Female
A		
B		
None	1	

P/4274	Male	Female
A		2
B		
None	1	1

P/619	Male	Female
A		
B	2	
None		

P/595	Male	Female
A	2	5
B		
None		

Figure 3. "E-Box" tabulation form