An Integrated System for the Recording and Retrieval of Medical Data in a Primary Care Setting

Part 7: The Encounter Form and the Minimum Basic Data Set

Jack Froom, MD
Rochester, New York

The encounter form is used to record information gathered during a patient encounter with a health facility. It should be designed to encourage collection of at least a minimum data set. There is as yet no universal agreement on a minimum data set for ambulatory patients. The data set recommended by the 1972 Chicago Conference on Ambulatory Medical Care Records is discussed. The encounter form also facilitates the flow of information between various components of a medical system, such as physicians, nurses, laboratory technicians, and billing and research clerks. Collation of data collected can facilitate office management, peer review, and health planning on regional, state and national levels.

The encounter form is an information recording device used for patient encounters within a health facility. The form specifies information that the health facility needs to facilitate the performance of a variety of its functions. Some of these functions include performance of medical procedures, collection of fees, and collection of data for statistical reports. The type and amount of information required will vary with the type of health facility and will be determined to some extent by its size, complexity, and the range of services it provides. All facilities, however, will require certain basic minimum information. This paper will describe how the Rochester Family Medicine Program collects a basic minimum data set and how we use our encounter form.

From the Family Medicine Program, University of Rochester-Highland Hospital, Rochester, New York. Requests for reprints should be addressed to Dr. Jack Froom, Family Medicine Program, University of Rochester-Highland Hospital, 335 Mt. Vernon Ave, Rochester, NY 14620.

Basic Data Set

Certain basic information has been defined for the hospital by the National Committee on Vital and Health Statistics. It is called the Uniform Hospital Abstract Minimum Basic Data Set,[1] and contains the following items to be collected for each hospitalized patient: (1) person identification (usually includes a hospital number), (2) date of birth (month, day, and year), (3) sex, (4) race (white, black, or other), (5) residence (including zip code), (6) hospital identification (a unique number within a data collection system), (7) admission date, (8) discharge date, (9) attending physician, (10) operating physician, (11) diagnoses, (12) procedures and dates, (13) disposition of patient, and (14) expected principal source of payment.

The hospital chart will, of course, contain additional medical information in accordance with good medical practice. The above data set, however, contains information that can be abstracted and will meet the needs of multiple users such as government agencies, research scientists, and insurance agencies.

There is as yet no agreement on a minimum basic data set for *ambulatory* patients. The ambulatory data set will differ from that needed by hospitals because ambulatory patients

(1) Name MARY JORDON
(2) Address 1842 CLINTON AVE. ZIP CODE 14620
(3) Date First Seen 8-16-71 Date of Birth 5-17-22 Place of Birth Census Tract
Telephone No. Home: Work:
Social Security No.
Occupation: Head of household Place of Employment of Payer:
Occupation: Self Address
Whom to Bill:
Type of Med. Ins.:
Contract No. Group No. Class No.
(6) ONIO Education: HS. C. PG.
Religion

Family Hx.	BIRTH DATE	State of Health
Father		
Mother		
Pat. g. f.		
g. m.		
Mat. g. f.		
g. m.		
(5) Spouse	1922	Good
Siblings		
Children		

Have you or any relative (blood) or husband or wife had:

	Self		Relative		Relationship
	no	yes	no	yes	
Diabetes					
Cancer					
Anemia					
Gout					
Kidney Disease					
High Blood Pressure					
Heart Trouble					
Bleeding Disorder					
Asthma Hay Fever					
Epilepsy Seizures					
Mental Retardation					
Malformation					
Neurologic Disease					
Stroke					
Blindness					
Thyroid Problem					
Deafness					
Venereal Disease					
Mental Illness					
Stomach or Bowel Problems					
Rheumatic Fever					
Tuberculosis					
Arthritis					

	Self			Self	
	no	yes		no	yes
Operations			Mumps		
Hospitalization			Chicken Pox		
Injuries			Rubella (3 day measle)		
Hepatitis - Jaundice			Scarlet Fever		
Pneumonia			Polio		
Tonsilitis			Tendency to infection		
Measles					

REMARKS: (Critical Information)

(4) SEX - Indicated by color of forms. Yellow for female; blue for male.

Menstrual History: Menarche ___ ; Frequency ___ ; Length ___ ;
Cramps ___ ; Clots ___ ; Gravid ___ ; para ___ ; ab ___ ;
Weight of Heaviest Child

Smoking History: Age Started ___ Cigarettes ___ Pipe ___ Cigars ___
Age Stopped ___ Quantity ___
Reason for Stopping ___ pack'yrs. ___

ALLERGIES:

Figure 1. Registration Data

are expected to have multiple contacts with a single facility. These contacts require a less intense service from the provider and the method of payment for these services is often more varied than in the hospital setting.

Generally, two types of data will be needed from the ambulatory patient. The first is *registration data* which is collected initially and upgraded regularly. The second is *encounter data* which must be collected at each encounter. At a conference on ambulatory medical care records held in Chicago, Illinois, in 1972, the following data set was recommended.

Registration Data: (1) person identification, (2) residence (including zip code), (3) date of birth, (4) sex, (5) marital status, and (6) race.

Encounter Data: (1) facility identification, (2) provider identification, (3) person identification, (4) source(s) of payment, (5) date, (6) patient's purpose, reason, symptom or complaint, (7) physician's diagnoses or problem designation, (8) diagnostic, therapeutic, or management procedures, and (9) disposition of patient.

The conference proposed that the National Committee on Vital and Health Statistics be responsible for refinement and testing of an ambulatory minimum basic data set. In response to this charge, the National Center for Health Statistics published an Ambulatory Data Set in August 1974. Unfortunately, the National Committee redefined their task and instead of a data set to be used for abstract purposes, they have "chosen, defined and categorized a set of items of information which should be entered into ambulatory medical care records. This task is distinct from that of specifying how information is to be abstracted from these records."[2] An agreed-to basic data set for abstract purposes is still needed and should be produced by a national committee.

The 1972 conference on ambulatory medical care records concluded that the data set that they had recommended was essential to help accomplish the following important functions: "(1) to assist the physician in caring for his patient and managing his practice; (2) to facilitate self-evaluation by the physician and professional reviews; (3) to provide the medical profession with a better understanding of the natural history of health problems, complaints, and diseases; (4) to assist those responsible for the management of office practices, clinics, group practices, hospital-based ambulatory services and other settings where ambulatory medical care is provided, in planning services, in allocating personnel, and other resources, and in monetary cost; (5) to assist medical educators in clarifying the objectives of their curricula for medical personnel and health services administrators; (6) to support the efforts of local, state, and national agencies, health departments, medical foundations, and regional medical programs in formulating objectives, plans, and policies for improving health care services; (7) to serve the needs of private insurance carriers, Blue Cross and Blue Shield, and Social Security Administration and related Federal payment programs, and to permit the development of uniform insurance claim forms and patient billing forms; (8) to provide epidemiologist and other health services investigators with sampling frames for research designed to improve the impact of health services."[3]

At the University of Rochester, we use the top portion of the front side of our standard initial data base form (Fig. 1) to collect the *registration data* of the recommended minimum data set. This form is color coded, yellow for female and blue for male. The illustrated form for females demonstrates the recording of the six recommended items. The circled numbers correspond to the Registration Data recommended by the Conference on Ambulatory Medical Care Records. Race is indicated by the code (C) Caucasian, (N) Negro, (I) Indian, (O) Other. The remainder of this form which constitutes part of our initial data base will be discussed in Part 8 of this series.

We collect the *encounter data* on our encounter form, which is a four-part, carbon-sensitive form. The top sheet of the form (Fig. 2) contains

HH-858/3 REV. 9/73

MASTER

No. 78815

⑤ Date 8-16-74

① Family Medicine Group

335 Mt. Vernon Avenue
Rochester, N. Y. 14620

③ MARY JORDAN 0345-2
First Name Last Name I.D. No.

1842 CLINTON AVE 14626
Address Zip Code

BILL TO:
☒ Patient
☐ Insurance

VOID (X)

5 17 22 3 3 M (F) C N S O
Birthday Census Sex Race

④ BC+BS 368277 X64
Insurance Number Coverage

SAN 0842-1
Head of Household I.D. No.

Rm

② Doctor JONES N NP S 1 2 3 (A) C
Code #

Also to See:

Appt. Time: AM PM ☐ - Walk In

Arrived: AM PM ☐ - Cancelled

Ready At: AM PM ☐ - Rescheduled

Seen At: AM PM ☐ - No Show

⑥ ☒ New Episode ☐ Recheck, Current Episode ☐ Recheck, Chronic Problem ☐ Transient-No ASR Card

Figure 2. Encounter Data (Items 1-6)

demographic, insurance, and provider information. It is completed by the receptionist and retained by her for control purposes.

This portion of our form contains the first six items of the recommended encounter data previously mentioned and the circled numbers correspond to the numbered items in that category. The code for provider (Item 2) is as follows: (N) Nurse, (NP) Nurse Practitioner, (S) Medical Student, (1) First Year Resident, (2) Second Year Resident, (3) Third Year Resident, (A) Attending Physician, or (C) Consulting Physician.

We do not identify the patient's purpose (Item 6) on the encounter form any more specifically than whether it is for a new episode or for a recheck of a current or chronic episode. It is difficult for paramedical personnel (who collect most of the encounter form data) to obtain an accurate assessment from the patient of the purpose of his visit. He may, for instance, state that his purpose is a prophylactic checkup when in fact it is to check on a recent episode of chest pain. However, details of the patient's purpose, reason, symptom, or complaint will be noted in the patient's chart.

The middle portion of the encounter form (Fig. 3) contains the type and level of services rendered. Under TYPE OF SERVICE there is the following code: (OV) Office Visit, (PE) Physical examination, (OB) Obstetrical visit, (SP) Specialist, (NP) Nurse Practitioner, or (V) Nurse Visit.

The numbers opposite these codes refer to the level of that particular service. This portion of the form contains information that is utilized by our accounting department. They receive the second sheet of our four-part encounter form. The research department receives the third sheet (identical to the second sheet) of the encounter form and is most concerned with the diagnostic information on the right bottom portion of the form. The physician or other health provider is required to furnish the three-digit diagnostic code number as indicated on the form. Our research clerk enters this information into the diagnostic index -E-book. This data is also keypunched and stored on magnetic tape for our morbidity recording project.[4] The fourth sheet, which is also identical to the others, is retained by the physician for his personal information and records.

The encounter form facilitates the flow of information between various components of a medical system. In a large clinic, communication among the various health providers, such as physicians, nurses, laboratory technicians and appointment secretaries can be aided by a properly designed encounter form. Even a solo practitioner with one or two employees can use an encounter form to direct his employees concerning services and charges. Later the form can be directed to the billing clerk and retained as a permanent record if this is desired.

In our unit, the physician marks the encounter form with the services that he rendered and with those to be rendered by nurse or laboratory technician. He indicates the disposition (lower left-hand portion of the encounter form) and records at least one diagnosis for billing purposes. He hands the form (second sheet) to the patient who is directed to either the nurse or laboratory technician and then to the appointment secretary. The physician retains the third sheet to record additional diagnoses at the time that he completes the writeup in the patient's chart.

We collate the service data monthly (Table 1) for planning and accounting purposes. Other operational data, such as No-Shows (appointment failures) are also studied. Our No-Show rate is currently about 10 percent of encounters and we are appraising techniques to reduce the rate.

Table 1. Summary of Services Rendered August 1974

Office Call – Physician	1,408
Nurse Practitioner	229
Nurse Visits	150
Complete Physical Examination	119
Home Visits	7
Surgery	60
E.K.G.	57
Injections	269
Skin tests for tuberculosis	113
Laboratory	
CBC	77
WBC	11
Hematocrit	349
Urine	503
Throat Culture	117
Monospot Tests	20
Pregnancy Test	18
Outside Laboratory	406
X-Ray	84

The Future

A universal encounter form would be desirable. It would require agreement about a coded diagnostic classification of diseases, a coded classification of procedures, and a minimum basic data set. The problems of design could be overcome and additional space provided for individual requirements. If a universal form were achieved, one copy could be forwarded to third party payers and would greatly reduce the time and cost of the present system of different forms for each insurance company. Compilation of data for statistical purposes would be enormously enhanced. Cost of medical services could be reduced and information for intelligent planning on a local, regional, and national level augmented. We currently have the knowledge and technology to produce a universal encounter form. What is lacking is agreement among all concerned parties.

References

1. National Center for Health Services Research and Development: Guidelines for Health Services R and D-3: Uniform Hospital Discharge Data. DHEW Pub (HSM) 72-3025, Department of Health, Education and Welfare, 1972

2. National Center for Health Statistics: Ambulatory Medical Care Records: Uniform Minimum Data Set; Vital and Health Statistics, Series 4 No. 16; DHEW Pub (HRA) 75-1453, Department of Health, Education and Welfare, 1974

3. Murnaghan JH (ed): Ambulatory Medical Care Data, Report of the Conference on Ambulatory Medical Care Records. Med Care 11 No. 2 (Suppl) 1973

4. Froom J, Metcalf D, Rozzi C: Computer analysis of morbidity recorded by primary care physicians. J Clinical Computing 2:42-51, 1973

14330-3

HH-858/3 REV. 9/73

CHARGE No. 78815

Date 8-16-74

Family Medicine Group
335 Mt. Vernon Avenue
Rochester, N. Y. 14620

MARY | JORDON | 0842-2
First Name | Last Name | I.D. No.

1842 CLINTON AVE | 14620
Address | Zip Code

BILL TO:
☒ Patient
☐ Insurance

VOID (X)

Rm ____

Doctor JONES Code # N NP S 1 2 3 (A) C

Also to See:

Appt. Time: 10 45 AM PM ☐ - Walk In
Arrived: 10 30 AM PM ☐ - Cancelled
Ready At: 10 45 AM PM ☐ - Rescheduled
Seen At: 10 50 AM PM ☐ - No Show

5 | 17 | 22 | 3 | 3 | M (F) (C) N S O
Birthday | Census | Sex | Race

BC+BS | 368877 | XG4
Insurance | Number | Coverage

SAM | 0842-1
Head of Household | I.D. No.

☒ New Episode ☐ Recheck, Current Episode ☐ Recheck, Chronic Problem ☐ Transient-No ASR Card

(8) **CHARGE SHEET**

✓	TYPE OF SERVICE	PT.	INS.
✓	OV (1) 2 3 4 5 6 7 8	9 00	
	PE 1 2 3 4 5 6 7		
	OB 1 2 4 5		
	SP 1 2		
	NP 1 2 3 4 5		
	NV 1 2		
	COUNSELING/TIME IN ¼ HOURS		
	HOME VISITS		
	HOSPITAL VISITS DAYS		
	SURGERY		
	WOUND LENGTH IN.		
	SUTURES NO. CODE		
	TREATMENT		
	SUBTOTAL		
	PATIENT LABS	3 00	
	INS. LABS		
	DISCOUNT (AMT. OR %)		
	TOTAL CHARGE	12 00	

☐ NO LABS REQUIRED

✓	LAB TEST	DONE	PT	INS.
	CBC			
	WBC			
	HCT			
	U/A			
✓	THROAT CUL.	mg	3 00	
	URICULT			
	MONOSPOT			
	PREG. TEST			
	SICKLEDEX			
	TINE			
	GUAIAC			
	EKG			
	SUB TOTAL LABS		3 00	

☐ CHARGES POSTED
☐ INS. FORM SUBMITTED ☐ AUDIT

OUTSIDE TESTS

✓	LAB TESTS	DONE
	ALK. PHOSPHATASE	
	BILIRUBIN	
	BUN	
	CHOLESTEROL	
	ELECTROLYTES	
	GLUCOSE F 2HRPP	
	GROUP A	
	PROTEIN ELECTRO	
	SEROLOGY	
	SGOT	
	PAP SMEAR	
	KCRL	
	CULTURE OF:	
	X-RAY:	

ADDITIONAL INSTRUCTIONS: ____

(9) **DISPOSITION:**

Next Appointment 1 month
(When & amount of time required)

With Jones

Refer/consultation Dr. ____

Hospital: Adm ____ Disch ____

CHANGE OF ADDRESS: ____

NEW PHONE ____

(7) **DIAGNOSTIC INFORMATION (E-BOOK)**

Written Dx for insurance: Pharyngitis
(on pink sheet)

	1	2	3
New Dx this visit	460		
Old Dx not prev. coded			
Old problems this visit, previously coded	322		

ONE WRITTEN AND CODED DIAGNOSIS REQUIRED FOR EACH VISIT
CODE ALL CONDITIONS DEALT WITH EACH VISIT

F CODES

☐ INSURANCE INFORMATION CONFIRMED (SEC:X)

MEDICAID ☐

TOTAL INSURANCE CHARGES $

PLEASE LEAVE AT FRONT DESK

Figure 3. Encounter Data (Items 7-9)