DOCUMENTS AND COMMITTEE REPORTS

Series 4
Number 16

# Ambulatory Medical Care Records: Uniform Minimum Basic Data Set

## A Report of the United States National Committee on Vital and Health Statistics

DHEW Publication No. (HRA) 75-1453

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service

Health Resources Administration
National Center for Health Statistics

Rockville, Md. August 1974


**Library of Congress Cataloging in Publication Data**

Main entry under title:

Ambulatory medical care records: uniform minimum basic data set; final report.

(Vital and health statistics. Documents and committee reports, series 4, no. 16) (DHEW publication no. (HRA) 75-1453)

Supt. of Docs. no.: HE 20.6209: 4/6.

Report prepared by Consultants selected by the U.S. National Committee on Vital and Health Statistics.

Includes bibliographical references.

1. Medical records. I. United States. National Committee on Vital and Health Statistics. II. Series: United States. National Center for Health Statistics. Vital and health statistics. Series 4: Documents and committee reports, no. 15. III. Series: United States. Dept. of Health, Education, and Welfare. DHEW publication no. (HRA) 75-1453. [DNLM: 1. Ambulatory care. 2. Medical record. W2A N148vd. no. 16 1974]

HA37.U1693 no. 15 [R864] 312'.0973s [651.5] 74-6288 ISBN 0-8406-0016-X

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 - Price 60 cents

# NATIONAL CENTER FOR HEALTH STATISTICS



**Vital and Health Statistics-Series 4-No. 16**
**DHEW Publication No. (HRA) 75-1453**
*Library of Congress Catalog Card Number 74-6288*

# FOREWORD

This report has been prepared by a group of consultants on ambulatory medical care records, under the auspices of the U.S. National Committee on Vital and Health Statistics. It sets forth and defines the minimum set of items of information that should be entered uniformly in the records of all ambulatory medical care, regardless of the setting in which the care is delivered. It also specifies classifications of the information that would be recorded for most of the items in the set.

In selecting and defining this minimum basic data set, the consultants were guided by two types of purposes that are served by the maintenance of ambulatory medical care records: (1) the improvement of ambulatory patient care; and (2) a variety of management, planning, educational, and research uses that can be carried out only when data have been abstracted from records and analyzed. Although the consultants' decisions on items to be included in the data set were influenced by the data needs for the second type of purposes, they have not specified the subset of the items on which data would need to be abstracted, assembled for groups of patients, and analyzed to serve any particular purpose.

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# CONTENTS

# AMBULATORY MEDICAL CARE RECORDS: UNIFORM MINIMUM BASIC DATA SET

## SUMMARY OF RECOMMENDATIONS

The Consultants on Ambulatory Medical Care Records, U.S. National Committee on Vital and Health Statistics, recommend that the following items constitute the *minimum* basic data set that should be entered in the records of all ambulatory medical care. Providers of ambulatory care should feel free to expand this minimum data set in accordance with their own particular requirements. The set of data that can be abstracted from the records for a particular purpose may not include all the items that should be entered into the records.

A. Items that characterize the patient

1. Patient identification
   a. Name

      Surname, first name, middle initial

   b. Identification number

      A unique number that distinguishes the patient and his ambulatory medical care record from all others

2. Residence

   Patient's usual residence, to consist of street name and number, apartment number (if any), city, State, and zip code

3. Date of birth

   Month, day, and year

4. Sex

   Male or female

5. Expected source of payment

   Government

   a. Workmen's compensation
   b. Medicare
   c. Medicaid
   d. Civilian Health and Medical Program of the Uniformed Services
   e. Other

   Insurance mechanism

   a. Blue Cross
   b. Blue Shield
   c. Insurance company
   d. Prepaid group practice or health plan
   e. Medical foundation

   Self-pay
   No charge (free, charity, special research, teaching)
   Other

B. Items that characterize the provider

1. Provider identification
   a. Name

      Surname, first name, middle initial

   b. Identification number

      A unique number that distinguishes the provider from all other providers

2. Professional address

   Street address, office number (if any), city, State, and zip code

3. Profession

   The profession in which the provider is currently engaged

   a. Physician

      Include specialty, if any, as determined by membership in, or eligibility for, specialty board

   b. Dentist

      (Include specialty)

   c. Nurse
   d. Other (specify)

C. Items that characterize the patient-provider encounter

1. Date of encounter

   Month, day, and year

2. Place of encounter
   a. Private office
   b. Clinic or health center (any except hospital outpatient department)
   c. Hospital outpatient department
   d. Hospital emergency room
   e. Home
   f. Other (specify)

3. Reason for encounter

   The patient's principal problems, complaints, or symptoms on this encounter, in the patient's own words

4. Findings

   All history, physical examination, laboratory and other findings pertinent to the patient's reasons for visit or diagnoses, or both, and any other findings the provider deems important

5. Diagnosis and/or problem

   The provider's current assessment of the patient's reasons for the encounter and all conditions requiring treatment, with the principal diagnosis and/or problem listed first. Principal diagnosis and/or problem is defined as the health problem that is most significant in terms of the procedures carried out and the care provided at this encounter.

6. Services and procedures

   All diagnostic, therapeutic, and preventive services and procedures (including history taking) performed during the encounter and those scheduled to be performed before the next encounter

7. Itemized charges

   All charges to be made by the provider for services and procedures performed during the encounter or to be performed by him or his associates before the next encounter

8. Disposition (one or more)

   The provider's statement of the next step(s) in the care of the patient

   a. No followup planned
   b. Return, time specified
   c. Return, P.R.N.
   d. Telephone followup
   e. Referred to other provider
   f. Returned to referring provider
   g. Admit to hospital
   h. Others

In addition to specifying the data set and defining the individual items of information that should be entered in all records of ambulatory medical care, the consultants make the following recommendations:

1. The consultants recognize that the primary purpose of medical care records is to facilitate patient care. Nearly all other purposes to be served by entering the uniform minimum basic data set in records of ambulatory care require that the information be easily retrieved from the records so that it can be assembled for all the patients of a single provider and aggregated and analyzed for groups of providers. The informa-

tion that identifies and characterizes the provider needs to be recorded only at the time the provider begins practice in a particular setting. The information that identifies and characterizes the patient should be recorded at the time of the first encounter with the provider and needs only occasional updating. Information that identifies and characterizes the encounter needs to be recorded at each encounter. The consultants recommend that the information be entered in a manner that will facilitate its being abstracted from the record.

2. The consultants recommend that the uniform *minimum* basic data set be accepted by the U.S. Department of Health, Education, and Welfare and other Federal agencies that operate or finance ambulatory medical care programs; and that the Federal agencies foster and promote the minimum basic data set for use in all these programs including Medicare, Medicaid, CHAMPUS, Children and Youth Projects, family health centers, Public Health Service hospitals, and Professional Standards Review Organizations, and in all statistical surveys of ambulatory medical care. The consultants further recommend that private health care institutions, professional organizations, and insurance carriers accept and encourage the use of the data set.

## INTRODUCTION

Most medical care is delivered in ambulatory care settings. Ambulatory care includes all care to patients who are not assigned inpatient beds. According to estimates from the Health Interview Survey, conducted by the National Center for Health Statistics, there were 1,017 million physician visits in the United States in 1972 (including telephone contacts), an average of 5.0 per person.[1] Seventy-three percent of the population consulted a physician at least once that year. In contrast, there were 28.5 million discharges from short-stay hospitals in 1972, an average of 0.14 per person; and 10.6 percent of the population were hospitalized at least once. Thus despite the fact that hospital inpatients generally have more acute medical problems (one reason they have been the primary focus of medical research and teaching), ambulatory care accounts for, in quantitative terms, most of the medical profession's efforts and the majority of the population's contacts with the health care system.

Despite the importance of ambulatory care, systematically gathered information concerning its characteristics is relatively sparse. Until the advent of the National Ambulatory Medical Care Survey—initiated in 1973 by the National Center for Health Statistics—only limited data were available for the United States as a whole, for any region, and for all but a few localities on ambulatory patients' complaints and conditions, medical services provided, or the disposition of patients. This lack of knowledge resulted largely from the inability to obtain pertinent data from the records of the providers of care. Items of information recorded by the different providers about the patient and the visit vary considerably. In addition, even for the items that are recorded, it is difficult to make comparisons because of differences in definition and classification.

At present there are several factors that make comparability of information in the records of ambulatory care providers more important than in the past. First, fewer and fewer providers are practicing alone, increasing the need for records that are complete and comprehensible to colleagues. Second, a larger part of ambulatory care costs is being paid by third parties, who require a uniform set of information on which to base payment. Finally, current interest in the quality and the cost of medical care (as manifested, for example, in the Federal legislation on Professional Standards Review Organizations)[2] necessitates the development of records that can be systematically reviewed and contain data that are comparable among providers.

Against this background, the Conference on Ambulatory Medical Care Records was held in Chicago in April 1972. It was sponsored by the National Center for Health Services Research and Development and the National Center for Health Statistics in the Department of Health, Education, and Welfare, and by The Johns Hopkins University, with support from the Commonwealth Fund. This Conference was patterned after the National Conference on Hospital Discharge Abstract Systems of June 1969, which had stimulated considerable interest and action in developing more systematic and uni-

form approaches to the abstracting of hospital inpatient data.

One of the main conclusions of the Conference on Ambulatory Medical Care Records was stated as follows:[3]

> We believe that the first and most important steps now are to identify the basic core of data germane to all [functions served by ambulatory care data] and to introduce uniform terms, definitions and classifications for this data set. A major concern of the Conference is the proliferation of different ambulatory medical record and reporting systems being introduced by federally sponsored health programs, by medical foundations and institutions, and by commercial data processing companies. We propose that a minimum uniform basic data set form a part of each patient's medical record, so that it will be universally available for abstracting, reporting and analysis.

The Conference requested that the U.S. National Committee on Vital and Health Statistics refine and develop the uniform minimum basic data set to appear in ambulatory medical care records and to specify formats for recording information for each item in the data set. The present report is based on the work of consultants whom the U.S. National Committee on Vital and Health Statistics selected in response to the recommendation of the Conference.

## OBJECTIVES AND APPROACH

### Purposes of Ambulatory Medical Care Data

The participants in the Conference identified eight broad purposes that can be served by a uniform minimum set of information on ambulatory medical care:[3]

1. To assist the physician in caring for his patients and managing his practice;
2. To facilitate self-evaluation by the physician and professional review;
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 monitoring costs;
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, the Social Security Administration and related Federal payment programs, and to permit the development of uniform insurance claims forms and patient billing forms;
8. To provide epidemiologists and other health services investigators with sampling frames for research designed to improve the impact of health services.

The consultants believe that entering a standard set of data items into ambulatory medical care records can assist in achieving these purposes. Specification of this set, however, must take into account the character of the system in which the items will be recorded. Ambulatory care records, no matter how simple, will consist of three informational components:

A. Information that identifies and characterizes the patient;

B. Information that identifies and characterizes the provider;

C. Information that identifies and characterizes each encounter between patient and provider (see "What Is an Ambulatory Medical Care Encounter?" below and appendix I for definition of "encounter").

Patient information should be recorded at the time of the patient's first encounter with a provider in a particular ambulatory care setting and should be kept up to date. Provider information should be recorded when a provider begins work in a particular setting and will remain the same until the setting or tasks change. Items of information that are specific to the patient-provider encounter should be recorded at each encounter; they include information on charges that may be maintained in a record separate from the record of other information on the encounter.

The primary reason for maintaining ambulatory medical care records is their value in provid-

ing care to the patient, in the same sense that the medical history is of value in making diagnoses and deciding on treatment regimens. Emphasis on preventive health care, the need of many patients for care that continues over long periods of time, and the fact that many individual patients receive care from two or more providers increase the value of the record in the provision of high-quality care. All other purposes to be served by the minimum basic data set can be served only if information is systematically recorded, abstracted from the record, and summarized. Fortunately many of the items of information which should be recorded in the interest of facilitating patient care are the same items that are needed for the other purposes. This fact gives rise to the concept of the uniform minimum basic data set. There is no implication that the minimum data set comprises *all* the information which providers should enter into ambulatory medical care records.

## What Is an Ambulatory Medical Care Encounter?

The consultants think that it is important not only to have a uniform set of items recorded at each encounter but to define the specific circumstances in which they are to be recorded. Borrowing from the *Guidelines for Producing Uniform Data for Health Care Plans,*[4] "encounter" has been defined as a face-to-face contact between a patient and a provider who, at the time of contact, has primary responsibility for assessing and treating or managing the condition of the patient and who exercises independent judgment as to the care of the patient. The provider at an encounter can be a physician, dentist, nurse, or any other health professional, so long as there is face-to-face contact and the professional uses independent judgment in the care of the patient. Under this definition a health professional who carries out a test or renders care that is ordered or prescribed by another health professional is not a "provider." (The advantages and disadvantages of this particular definition of "encounter" are outlined in appendix I.) An *ambulatory care* encounter is simply one in which the patient is neither hospitalized nor institutionalized at the time of the encounter; some examples of settings in which ambulatory care can take place are a physician's office, an outpatient clinic, the patient's home, and a health center.

## Criteria for Inclusion and Classification of Items in the Minimum Set

The *minimum* set of items was considered to be that set which should be present in every ambulatory care record. No attempt was made to produce a set of items sufficient for all the purposes identified by the Conference on Ambulatory Medical Care Records, nor an individual optimum set for any single purpose. For example, to care properly for some of his patients, the provider of care will need to record considerably more detail than is specified here and should feel free to do so in accordance with his own particular needs. Nonetheless, the consultants have chosen a set of items that is fairly comprehensive and one that will not in the near future be exceeded by parties requesting information from providers regarding the delivery of care. It is hoped that with widespread adoption of this set of items, a reduction of uncertainty over future requirements for information from providers will be achieved.

Items considered for inclusion were taken from those cited by the Conference on Ambulatory Medical Care Records, as well as from suggestions of the consultants. Selection of an item was guided by those that were already being widely recorded with reasonable accuracy. The items were reviewed against the purposes that ambulatory care data could serve and, depending on the capability of each item to help in fulfilling these purposes, were either accepted or rejected from the minimum set.

Each item has been defined. For most items a classification of the information to be recorded has been specified. Where appropriate, the format matches that used in the Uniform Hospital Discharge Data Set[5] or the National Ambulatory Medical Care Survey. For other items, such as "Reason for encounter," "Diagnosis and/or problem," and "Services and procedures," none is suggested, since the choice of a particular scheme depends on which purpose of ambulatory care data is to be served. The general principle followed in selecting classifications is that of minimal specificity. Many providers will

need greater detail for some of the items to achieve their immediate purposes; for example, under the item "Expected source of payment" if the patient's bill is to be paid by an insurance company, the provider would likely wish to record the name of the carrier. Nonetheless, what the provider does record should be classifiable into the categories shown in this report; in the example above, the name of the specific company could subsequently be abstracted as category "Insurance company" (see Item A, 5).

## THE MINIMUM BASIC DATA SET TO BE ENTERED INTO AMBULATORY MEDICAL CARE RECORDS

A. Items that characterize the patient.

1. *Patient Identification*
   a. *Name.* Surname, first name, middle initial.

   b. *Identification number.* A unique number that distinguishes the patient and his ambulatory care record from all others.

      *Comment:* Many patients have multiple encounters within a single provider setting. It is important for medical, planning, administrative management, and research reasons that it be possible to link together the records of all such encounters. A unit record number system is the most effective means of assuring this linkage. In this system the patient is assigned an identification number at the time of the initial encounter, and the same number is used in all later encounters.

      Many patients encounter multiple providers as both ambulatory patients and inpatients. The capability for linking records on encounters with different ambulatory care providers and with hospital inpatient records is important for the same reasons cited above. Use of a unique identifying number which is permanently assigned to each individual would be the most effective method of enabling linkage. Such a standard, universal number does not exist at present.

      It is recommended that wherever possible the Social Security Number be used for this purpose. If such use continues to be consistent with Federal policy, it is expected that use of the number to identify medical records will become universal. Not all patients have or know their Social Security Number, but use of this number can be initiated for those who do with the expectation of substituting the Social Security Number for other patient numbers as they become available. Use of the Social Security Number is now required in medical records when reim bursement for care is made from Federal funds directly to the provider, in medical records maintained by the Indian Health Service, and in hospital records of the Armed Forces and Veterans Administration. Its use in widespread record linkage in fields other than health has been cost-effective, e.g., for income tax reports and drivers licenses.

      Problems which may be encountered in use of the Social Security Number are similar to those encountered in use of other numbering systems. These are mainly errors in reporting the number. Occasional difficulty in correct identification of individuals is likely to occur with use of any numbering system. Safeguards required to maintain confidentiality of patient information are also similar to those required with any other numbering system.

      The Social Security Number is also recommended for use as the provider identification number (see Item B, 1b).

2. *Residence.* Patient's *usual* residence, to consist of street name and number,

apartment number (if any), city, State, and zip code.

*Comment:* It is recognized that patients can have several addresses, all of which differ: address of current residence, billing address, legal address, etc. These multiple addresses occur most frequently when the potential patient population contains college students, military personnel, or visitors to the area. Each of these addresses can be relevant and necessary information to the provider; it is not the intent of this item to preclude inclusion of multiple address information in the record. When more than one address is recorded, each should be properly and consistently identified. The usual or permanent address is the one preferred for geographic coding in studies of utilization of services. An example:

a. Usual or permanent address
b. Local address (if not usual)
c. Billing address (if not local and usual)

3. *Date of birth.* Month, day, year.

4. *Sex.* Male, female.

5. *Expected source of payment.* The following classification, similar to that recommended in the Uniform Hospital Discharge Data Set,[5] is suggested as a minimum:

*Government program*

a. Workmen's compensation
b. Medicare
c. Medicaid
d. Civilian Health and Medical Program of the Uniformed Services
e. Other (specify)

*Insurance mechanism*

a. Blue Cross
b. Blue Shield
c. Insurance company
d. Prepaid group practice or health plan
e. Medical foundation

Self-pay

No charge (free, charity, special research, teaching)

Other (specify)

B. Items that characterize the provider.

1. Provider identification (for definition of "provider," see prior discussion, "What Is an Ambulatory Medical Care Encounter?").

a. *Name.* Surname, first name, middle initial.

b. *Identification number.* A unique number that distinguishes the provider from all other providers.

*Comment:* Several providers may render care in the same setting and many providers practice in more than one setting. An example of the latter is the solo practitioner who also sees patients in a hospital outpatient department or emergency room. Use of a unique number for each provider will make it possible to distinguish his patients from those of another provider in the same setting and also to identify all of the patients whom the provider encounters in various settings. A single provider identification number will also benefit the provider, for it can replace the many different numbers with which he may currently identify himself in different situations.

It is recommended that providers use the Social Security Number to identify themselves in all situations in which they have this option, with the expectation that in time its use will become universal. Many third-party payers (e.g., Medicare) now require use of the Social Security Number for provider identification.

The Social Security Number is also recommended for use as the patient identification number (see Item A, 1b).

2. *Professional address.* Street address, office number (if any), city, State, zip code.

3. *Profession.* That profession in which the provider is currently engaged. The following classification is suggested as a minimum:

   a. Physician

      Include specialty, if any, as determined by membership in, or eligibility for, specialty board.

   b. Dentist (Include specialty)
   c. Nurse
   d. Other (specify)

C. Items that characterize the patient-provider encounter.

1. *Date of encounter.* Month, day, year.

   *Comment:* To assist in allocating personnel and monitoring cost, some larger practices, consisting of several types of providers, may wish also to record the time and the duration of the encounter.

2. *Place of encounter.*

   a. Private office
   b. Clinic or health center (any except hospital outpatient department)
   c. Hospital outpatient department
   d. Hospital emergency room
   e. Home
   f. Other (specify)

   *Comment:* The purpose of this item is to identify the physical location of the encounter. Encounters that occur in facilities shared by several providers should be classified as "private office" rather than "clinic or health center" if payment for care is made to an individual provider rather than to an organization of providers. Group practices and health maintenance organizations in which the physicians pool their income should be classified as "clinic or health center."

3. *Reason for encounter.* The patient's principal problem(s), complaint(s), or symptom(s) at this encounter, *in the patient's own words.* If more than one reason is given, list as first the one most important to the patient.

   *Comment:* The inclusion of this item, normally elicited by the provider to help him focus on the patient's concerns, will also be useful for health services research, for planning, and for studies of the natural history of illnesses. By specifying that the reason for visit be recorded in the patient's words, the provider will be discouraged from substituting his own words, which frequently take the form of a diagnosis rather than the patient's statement of symptoms or complaints. For example, if the patient complains of being short of breath the provider would record just that, rather than "dyspnea" or a specific diagnosis. However, ethnic terms which are not generally understood may be translated into more familiar laymen's terms.

4. *Findings.* All history, physical examination, laboratory, and other findings pertinent to the patient's reasons for the encounter or diagnoses, and any other findings or results of diagnostic procedures which the provider deems important.

   *Comment:* To care properly for the individual patient, it is essential that there be a statement in the record of the provider's findings. The consultants did not attempt to spell out the detailed content of this area. For certain purposes, such as professional review it may be necessary to specify particular items that should be included in the record. However, this should be a matter of the individual provider's option, at least until such time as experience with such programs as the Professional Standards Review Organizations provides some observations that can be used as guidelines.

5. *Diagnosis and/or problem.* The provider's current assessment of the

patient's reasons for the encounter and all conditions requiring treatment or management. Depending on the amount and kind of information which the provider has secured about the patient and his personal preferences, the diagnoses and/or problems may be stated as symptoms, problems requiring management, and formal diagnoses. The provider may wish to refer to the systems of recording problems or symptoms developed by Weed[6] and Hurtado and Greenlick[7] as aids to systematic recording. The principal diagnosis and/or problem should be listed first and is defined as the health problem that is most significant in terms of the procedures carried out and the care provided *at this encounter.* When possible, the diagnosis should be expressed in the nomenclature given in *Current Medical Information and Terminology,* though CMIT does not include all acceptable diagnostic terms.

*Comment:* The consultants concluded that most of the purposes of data on ambulatory care require the knowledge of only those diagnoses and/or problems relating to the patient's reasons for the current encounter or for which he receives treatment. It is acknowledged that without any specific instructions for classification of diagnoses and/or problems the recommended format may not prove optimally useful for some purposes.

6. *Services and procedures.* All diagnostic, therapeutic, and preventive services and procedures (including history taking) performed during the encounter or scheduled to be performed before the next encounter.

   *Comment:* For purposes of professional review, planning, clarifying curricula objectives, and health services research, it is particularly important that the services and procedures provided be recorded in as much detail as possible. This detail would also enable charges for an encounter to be compared meaningfully among providers. No particular terminology of services and procedures is recommended at this time. The consultants encourage efforts to develop and evaluate terminologies that are useful to providers, third-party payers, planners, and researchers on health services. One such effort is the Uniform Medical Procedures Terminology and Code Project established by the Assistant Secretary for Health, DHEW. Similar developmental activities by other governmental and private organizations are essential in arriving at a standard terminology which will meet the needs of all interested parties.

7. *Itemized charges.* All charges to be made by the provider for services and procedures performed during the encounter or to be performed by him or his associates before the next encounter. Each charge is to be related to a specific service or procedure.

   *Comment:* In those cases where there has been capitation prepayment of services and no fee schedule is associated with a specific service, this item would be deleted.

8. *Disposition.* The provider's statement of the next step(s) in the care of the patient. The following classification is suggested as a minimum:

   a. No followup planned
   b. Return, time specified
   c. Return, P.R.N.
   d. Telephone followup
   e. Referred to other provider
   f. Returned to referring provider
   g. Admit to hospital
   h. Other

   Two or more dispositions may apply for some encounters, and all should be recorded, e.g., e. Referred to other provider, and either d. Telephone followup or b. Return, time specified.

## THE MAINTENANCE OF CONFIDENTIALITY

The President's Commission on Federal Statistics has formulated two criteria for confidentiality of data supplied by or obtained from persons about themselves:

1. Disclosure of data in a manner that would allow public identification of the respondent or would in any way be harmful to him is prohibited; and
2. The data are immune from legal process.[8]

Physicians and other providers of health care have a long tradition of maintaining the confidentiality of information given to them by patients or developed during the provision of care, and they allow other persons access to it only under certain circumstances. These circumstances include the following:

1. Specific authorization by the patient to supply the information, most commonly to third-party payers in support of claims.
2. Receipt of assurance that information released will be held in confidence by the person or organization to which the information is given. This is frequently the circumstance in which one provider supplies information to other providers of medical care (confidentiality implied) and to research investigators and statistical reporting programs (confidentiality generally made explicit in a formal statement).

The items of information in the uniform minimum data set should be afforded the same safeguards with respect to confidentiality as all other items of information in the ambulatory medical care record.

## USES AND LIMITATIONS OF THE MINIMUM DATA SET AND ITS RELATIONSHIP TO AN AMBULATORY CARE ENCOUNTER FORM

The consultants 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.* Indeed, the organization of most ambulatory care records does not lend itself to easy retrieval of particular items. The placement and wording of items varies from record to record of a single provider, and even more among the records of different providers.

In considering items of information for inclusion in the minimum data set the consultants recognized that they naturally fall into groups of items that identify and characterize the patient, the provider, and the encounter between patient and provider. Because of differences in frequency of recording the three types of information, it would be practical for abstracting purposes to enter various items in separate parts of the record or to maintain separate records. Legal requirements and professional standards for the maintenance and authentication of medical records should be observed in recording the information. Abstracting information from the records will be facilitated if the items of data are grouped as shown in table A.

Items of information that are listed for two or more records are those needed for identification.

It is recognized that some of the records need not be maintained in certain settings. For example, in a prepaid group practice or health care plan the patients are not charged for services provided, so that a billing record is not needed. In the case of a solo practitioner, a provider record is not needed and it may be desirable to combine the other items of information in a single record. These differences in the types of records that are maintained should not affect ability to record the minimum data set in a uniform manner.

Abstracting the minimum basic data set from the total ambulatory medical care record would be greatly simplified if the information were entered in a uniform systematic fashion in all of the records of a particular provider. There are various ways of accomplishing this. One is for the provider to enter the items that have been identified as pertaining to the encounter and those pertaining to the patient in separate, labeled parts of the ambulatory care record. Another is to have the two sets of information entered on separate pieces of paper—an encounter form and a patient form—so that the

Table A. Items of information for inclusion in medical records

| Data item | Provider record | Patient record | Encounter record | Billing record |
|---|---|---|---|---|
| Provider name | X | | X | X |
| Provider identification no. | X | | X | X |
| Provider address | X | | | |
| Provider profession | X | | | |
| Patient name | | X | X | X |
| Patient identification no. | | X | X | X |
| Patient residence address | | X | | X |
| Patient date of birth | | X | | |
| Patient sex | | X | | |
| Principal source of payment | | X | | |
| Date of encounter | | | X | |
| Place of encounter | | | X | |
| Reason for encounter | | | X | |
| Findings | | | X | |
| Diagnoses | | | X | |
| Services and procedures | | | X | |
| Charges | | | | X |
| Disposition | | | X | |

information could be extracted by simply making copies of the forms. Alternatively, snapout forms with multiple copies could be used.

There is no intention of prescribing a specific format. It seems wiser at this stage of development of ambulatory care information to be flexible so that each user can adapt the format to his own situation.

Such a patient form and encounter form need not be restricted to the items contained in the minimum basic set, but could include other items desired by the provider. Information systems are being developed and established in many ambulatory care settings, each with its own set of data items. It is recommended that the items in the proposed minimum basic data set be the uniform core set of items for all such information systems to the extent that they are pertinent to the purposes served by the systems.

The following discussion provides examples of how the minimum data set and patient and encounter forms can be used together to achieve the eight purposes of ambulatory care data defined by the Conference on Ambulatory Medical Care Records (see the section "Objectives and Approach"). It is clear that none of these purposes can be served without development of methods for extracting the information from the records, and that for most of the purposes the information so extracted must be assembled for groups of providers and analyzed in systematic fashion.

## Office and Practice Management (Purposes 1, 4, and 7)

The consultants believe that the inclusion of a minimum set of items in the ambulatory care record and on an encounter form can be of great assistance to physicians and other providers of health care. The information in the minimum

data set, along with other information which the provider wants to record, serves as a basis for planning individual patient care, for documenting and evaluating the course of the patient's illness, and for communication among several providers of care to the same patient. If the items were placed in machine-readable form and a computer were available, the provider could easily be given an up-to-date patient profile.

The data set should simplify the process of billing and collecting fees when there is third-party payment. Indeed, the careful organization of the encounter form would make it possible to relate the service or procedure rendered to the appropriate fee schedule. For this process to work effectively, however, there must be a nomenclature for services and procedures that is adhered to by both providers and third-party payers. The consultants urge that representatives of both groups develop and implement such a uniform nomenclature of services and procedures.

Successful management of a medical practice involves control of expenditures, and in all but the smallest practices successful control requires information on the relative costs of providing services under different forms of manpower organization. The minimum set of items, available on a copy of an encounter (and claim or billing) form, can serve this internal accounting function to a large extent.

## Evaluation of Care and Research (Purposes 2, 3, and 8)

Purposes 2, 3, and 8 are grouped because the entry of a uniform minimum set of items on ambulatory care records can help achieve them in the same two ways: it can determine the frequency with which specified events occur, and can provide a sampling frame from which a subset of encounters can be selected for more intensive study.

*Evaluation of the quality and costs of health care.*—It is necessary to have specific criteria in order to adequately judge whether the quality or cost of care in a particular instance is appropriate. Prominent among such criteria are the particular local or regional patterns of delivery or charges for care. The presence of a uniform set of items in the records of all providers, particularly if in a standardized format or included on an encounter form, would enable such local and regional patterns to be determined quickly and accurately. A further advantage is that the set of all encounters can be easily screened for a subset to be more intensively reviewed. To identify encounters for which it is suspected that care has not been properly given, the provider's records (or more quickly, encounter forms, if available) would be reviewed for encounters in which, for example, the "services and procedures" or "disposition" were not appropriate to the patient's "reason for encounter," the provider's diagnosis, or both. More detailed information regarding these suspect encounters could then be obtained from the patient and the provider in order to make a judgment. Similarly, encounters could be screened for inappropriate combinations of "services and procedures" and "charges," thus providing a tentative identification of instances in which charges may have been excessive.

*Study of health care delivery and of the natural history of diseases.*—The presence of a uniform set of items in the records of all providers of care in a defined area has the potential to describe objectively (1) the frequency and distribution of complaints and illnesses for which professional care is sought, and (2) the health care providers' ways of dealing with these complaints and illnesses. To facilitate the achievement of this potential, the set of items should be entered in a standard format to enable rapid abstracting. A further advantage of a standard format is that subsets of encounters can be rapidly screened for those in which there were certain symptoms, diagnoses, or dispositions, for example, so that these could be followed up in detailed studies of specific hypotheses.

## Education and Planning (Purposes 5 and 6)

In order for educators of health professionals to plan curricula around those activities that are quantitatively of greatest importance in ambulatory care, they need to know the relative frequencies of those activities. Areawide health planners, to do their job properly, need to know the frequency of various professional activities. Their needs can be relatively easily met by the

incorporation of a uniform set of items in ambulatory care records, once records from a representative sample of a defined population are made available to them since neither the educator nor the planner needs to identify specific patients. Again, if the items were to appear on a standard encounter form, their task would be further simplified.

## IMPLEMENTATION OF THE MINIMUM BASIC DATA SET

The uses of the data set which are summarized in the preceding section and set forth elsewhere in greater detail[3,4] make a convincing case for the need for uniform, systematic information on ambulatory medical care. Increases in the proportion of ambulatory services that are being paid for by third parties and on a capitation basis, proliferation of different information systems by public and private organizations which pay for care, and the imminent establishment of Professional Standards Review Organizations to maintain the quality and control the costs of care lend urgency to the widespread adoption of the minimum basic data set.

Development of specific proposals for implementation of the data set are beyond the responsibilities of the consultants to the U.S. National Committee on Vital and Health Statistics. The consultants feel strongly, however, that the various Federal agencies that operate programs providing ambulatory care either directly or through financial support to other public and private organizations should take the lead, by accepting the minimum basic data set and fostering and promoting its use wherever possible in all such programs. These include Medicare, Medicaid, CHAMPUS, outpatient departments of Public Health Service hospitals, Children and Youth projects, family and neighborhood health centers, clinics of the Indian Health Service and the Veterans Administration, and Professional Standards Review Organizations. Statistical surveys of ambulatory care by the Social Security Administration, National Center for Health Statistics, the Cooperative Health Statistics System and other agencies should employ the data set. The consultants also recommend that private health care plans, insurance carriers, and professional organizations that influence the activities of health care institutions should encourage the use of the minimum basic data set in all ambulatory medical care records.

## FUTURE REVISION OF THE MINIMUM BASIC DATA SET

The data set presented in this report has been developed on the basis of expert opinion and the limited experience available from various sources in the systematic recording of information in ambulatory medical care records. Difficulty may be encountered in getting certain items recorded with a satisfactory degree of completeness and accuracy; the definitions and classifications proposed for individual items may not be the most suitable; and some of the items of information may not prove to have the anticipated value. Experience in using the data set as an aid in patient care, for supplying evidence in support of individual claims for reimbursement, and for providing statistical data on ambulatory care for management, community planning, research, and medical education may indicate need for modification of the data set.

It would be desirable that field tests of the feasibility of recording the data and of their utility for the purposes stated earlier be carried out before the set is put into large-scale use. The need for the data set is urgent, however, and probably will not wait for completion of adequate tests. The consultants therefore recommend that (1) agencies such as the National Center for Health Statistics and the Bureau of Health Services Research undertake as soon as possible formal field tests of feasibility and utility with respect to the data set as a whole and of the individual items, in each of the major settings in which ambulatory care is provided; (2) agencies that employ the data set before completion of the field tests also make provision for evaluating the quality, usefulness, and problems encountered in recording of items in the data set that are of particular interest to them; and (3) after a suitable period of testing and use, a representative group be assembled to revise the uniform minimum basic data set in the light of that experience.

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# APPENDIX I

## DEFINITION OF AN AMBULATORY CARE ENCOUNTER

To obtain information on the totality of ambulatory care, the broadest possible definition of "encounter" should be employed, i.e., any contact between a patient and the medical care system in an ambulatory care setting. For the following practical reasons, however, the consultants decided not to recommend a definition of this sort:

1. Medical personnel who deal with the patient but who do not use independent judgment in his care (e.g., X-ray or EKG technicians, laboratory personnel) generally would not be able to complete many of the items in part C (encounter items).

2. Contacts between patient and provider that are not face to face, e.g., telephone calls, probably would not be recorded uniformly among providers.

3. Surveys that produce data on per capita physician utilization exclude certain contacts from consideration, e.g., visits to a radiologist for diagnostic X-rays. If data from provider's records were to include such contacts, comparisons with the surveys would be difficult to interpret and the continuity of utilization statistics might be hampered.

The consultants recommend instead that encounter items be recorded each time there is a face-to-face contact between a patient and a provider who, at the time of contact, has primary responsibility for assessing and treating the patient's condition and who exercises independent judgment as to the care of the patient. They also recommend that the provider record not only services given at the encounter itself, but those scheduled to occur before a subsequent encounter. Completion of the service or procedure can be indicated by a note or mark adjacent to the original scheduling statement. In this way it is hoped that, except for telephone calls, most ambulatory care activities will be accounted for. Experience will be the judge of this particular scheme. The consultants encourage the development of any system that optimizes both the completeness and the reliability of recording ambulatory care encounter data.

Some of the services that would not be accounted for under this definition of an encounter are recorded separately, e.g., in X-ray logs. If the objective is to account for all services rendered, including telephone calls, it is recommended that those not coming within the definition of "encounter" be kept separate so that they can be excluded in the interest of comparability.

# APPENDIX II

## GROUPS FROM WHOM OPINIONS WERE SOLICITED REGARDING THE CONTENT OF THIS REPORT

American Academy of Family Physicians
American Academy of Obstetricians and Gynecologists, The
American Academy of Pediatrics
American Association of Foundations for Medical Care
American Association of Medical Clinics
American College of Physicians
American College of Surgeons
American Hospital Association
American Medical Association
American Osteopathic Association
American Public Health Association
American Society of Internal Medicine
Association of American Medical Colleges
Association of State and Territorial Health Officers
Commission on Professional and Hospital Activities
Group Health Association of America
Health Insurance Association of America
National Ambulance and Medical Services Association
National Association of Blue Shield Plans
National Medical Association
Social Security Administration

*Schools of Public Health*

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University of California at Los Angeles, School of Public Health
Columbia University, School of Public Health and Administrative Medicine
Harvard University, School of Public Health
University of Hawaii, School of Public Health
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Loma Linda University, School of Public Health
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