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VITAL and HEALTH STATISTICS
DATA EVALUATION AND METHODS RESEARCH

pilot study on

Patient Charge Statistics

A study to develop methodology for collecting information on hospital charges in the Hospital Discharge Survey.

Washington, D.C. May 1968

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
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FOREWORD

This report presents the results of a pilot study which was undertaken to investigate the feasibility of collecting information about hospital charges from the patient charge ledgers on file in the business offices of hospitals. The report also presents findings and recommendations regarding the methodology for collecting patient charge statistics on a continuing basis for a national sample of patients in the Hospital Discharge Survey.

The objective of the Hospital Discharge Survey is to produce national statistics on hospital patients which are representative of the experience of the civilian population in short-term hospitals. Since the latter part of 1964, selected items of social and medical information about discharged patients have been abstracted from the patient medical records. It is planned to expand the content of the Hospital Discharge Survey by linking the information about the patient, which is currently being collected from the medical records, to information about his hospital charges, that will be collected from the patient charge ledgers.

In July of 1965, the National Center for Health Statistics convened an Ad Hoc Committee on Hospital Charges to advise on matters pertaining to the collection of statistics on hospital charges and sources of payment. In particular, the Center sought the advice of this Committee with regard to (1) the kinds of patient charge data that would be most useful, and (2) the problems that could be expected in abstracting these data from the patient charge ledgers. The members of this Committee included: Mrs. Agnes W. Brewster, Division of Community Health Services, PHS, HEW; Dr. Donald C. Riedel, Blue Cross Association; Mr. Robert M. Sigmond, Hospital Planning Association of Allegheny County, Pa; Mr. William Spector, American Hospital Association; and Mr. Theodore D. Woolsey, Dr. Monroe G. Sirken, and Mr. Milton C. Rossoff from the Center.

In 1966, the Center contracted with Booz, Allen, and Hamilton, Inc., to undertake a pilot study on hospital patient charges. The project was started in July 1966 and the work was completed as planned about 8 months later. During this period, there was very close collaboration between the staffs of Booz, Allen, and Hamilton, Inc., and of the Center. Dr. Robert H. Hamlin of Booz, Allen, and Hamilton was project director and he and his staff, including Michael A. Green, Douglas W. Metz, and John L. McKee, were responsible for conducting the pilot study and preparing this report. The Center staff included John Monroe and Milton C. Rossoff, and Monroe G. Sirken, who was project officer. The Demographic Survey Division of the Bureau of the Census participated in the field work of the study.

From the viewpoint of the National Center for Health Statistics, this was an efficiently conducted pilot study that was exceptionally well planned and implemented on a timely basis. The results of the study presented in this report have demonstrated the feasibility of collecting national hospital charge statistics classified by types of services provided and by sources of payment based on information reported in the patient charge ledgers. The findings will be valuable in deciding on methods to be used and in preparing the procedures for collecting this information in the Hospital Discharge Survey.

Monroe G. Sirken, Director
Office of Statistical Methods

CONTENTS

IN THIS REPORT, the results of a pilot study to develop the methodology for instituting a continuous program for collecting information on patient charges and sources of payment as a part of the Hospital Discharge Survey are presented. These results relate specifically to the development of methodology for utilizing hospital ledgers of patient charges as the source of information on charges for the national sample of patients in the survey. Currently, the Hospital Discharge Survey is limited to the collection of specified items of information about patients available from the patient medical records.

The study concludes that it is both feasible and practical to institute a continuous program for collecting patient charges and sources of payment data as part of the Hospital Discharge Survey. The principal findings were that (1) the dollar amounts of charges by selected types of services and sources of payment are available from the ledgers of patient charges or can be estimated in all hospitals, (2) the agreement in the definition of types of charges and sources of payment is sufficient to permit gross comparisons among hospitals, and (3) hospitals are cooperative and their employees can accurately abstract the information from the ledgers of patient charges.

SYMBOLS

Data not available	---
Category not applicable	...
Quantity zero	-
Quantity more than 0 but less than 0.05	0.0
Figure does not meet standards of reliability or precision	*

PILOT STUDY ON PATIENT CHARGE STATISTICS

I. SUMMARY OF THE STUDY

This chapter summarizes the background, objectives, methodology, and principal findings and conclusions of the pilot study on hospital patient charge statistics.

BACKGROUND

The subject of patient charges in hospitals is receiving increased attention by the medical and health care communities, government agencies with public health responsibilities, and the general public. The rapid rise in hospital charges and costs, the increasing demand for hospital services, and the rather substantial restructuring of mechanisms for financing hospital care (e.g., the growth of third parties as sources of payment, including the Medicare and Medicaid programs), have stimulated both the need and desire for improved data on patient charges in hospitals.

Currently, little information on a national basis is available on patient charges which (1) reflects a cross section of U.S. hospitals, enabling generalization to the total population of patients and hospitals; and (2) presents a trend analysis, on a continuing basis, of variations in charges over time.

To meet the general need for additional and improved data on patient charges in hospitals, the National Center for Health Statistics (NCHS) of the U.S. Public Health Service sponsored this pilot study on patient charge statistics.

OBJECTIVES OF THE STUDY

The purpose of the pilot study was to determine the feasibility and practicality of instituting a continuous program for collecting patient charge and source-of-payment information as a part of the Hospital Discharge Survey of NCHS, which currently is limited to the collection of patient medical record information.

The major objectives of the study were to determine whether:

> Information in hospitals is available on the dollar amount of total charges for a single episode of hospitalization, broken down into room and board charges and other charges, and by source of payment (e.g., Blue Cross, Medicare, personal, etc.), as prescribed by the Ad Hoc Committee on Hospital Charges.
>
> Consistent definitions exist among hospitals for the requisite patient charge and source-of-payment information.
>
> Specified patient charge and source-of-payment data are readily obtainable.
>
> Valid patient charge data can be abstracted from hospital records by hospital personnel.
>
> Abstracting can be done by hospital personnel at a reasonable cost.
>
> Patient charge and source-of-payment data can be related to medical record data abstracted for the same patient and admission.

METHODOLOGY

The methodology of the pilot study involved three major phases.

Phase 1.—Development and pretesting of an interview schedule, abstract form, and study pro-

cedures in five hospitals not a part of the Hospital Discharge Survey.

Phase 2.—Administration of the interview schedule with selected hospital personnel and abstraction of patient charge ledgers by survey staff in a national sample of 20 field test hospitals not a part of the Hospital Discharge Survey.

Phase 3.—Administration of a revised interview schedule and abstraction of patient charge ledgers by hospital personnel in five hospitals already included in the Hospital Discharge Survey, with verification of their abstraction accuracy by independent review of survey staff.

Throughout the report the 20 hospitals in Phase 2 of the study are referred to as the field test hospitals and the 5 hospitals in Phase 3 as the final test hospitals. A glossary of terms used in the report is presented in Appendix A, at the end of this report.

Direct interviews were conducted with more than 50 hospital administrators and accounting department personnel in the 25 hospitals surveyed. Of the more than 2,000 patient charge ledgers identified by random and purposive selection, 1,064 patient ledgers, with complete data, were abstracted.

The study team was composed of six individuals, three of whom conducted the field work. Personnel from NCHS and the Bureau of the Census participated with the study team in abstracting patient charge records in several hospitals. Hospital personnel in the five final field test hospitals abstracted patient charge records in accordance with a training and an instruction manual developed by the survey team and administered in each hospital by a team member.

In the 20-hospital field test, it was found that data from 2 hospitals with computerized patient charge systems were not obtainable because special programming would have been required to secure the information needed for patient charge abstracting. Therefore, such hospitals were excluded from the final field test phase of the study.

MAJOR FINDINGS AND CONCLUSIONS

On the basis of the principal study findings, it was concluded that it is both feasible and practical for NCHS to institute a continuous program for collecting patient charge and source-of-payment data as a part of the Hospital Discharge Survey. The principal findings were:

Data on the dollar amounts of room and board charges, other charges, personal nonmedical charges, and sources of payment are available or can be estimated in all hospitals.

Sufficient consistency exists in the elements that hospitals include in room and board charges to permit gross comparison of such charges among hospitals. Hospitals vary in the items included in the category of other charges, but comparisons of other charges among hospitals can be made since significant variations are limited to only a few classes of charges, such as anesthesiology services.

Hospital employees can accurately abstract valid patient charge and source-of-payment data if appropriate on-site training is provided by the survey staff.

Hospital personnel can abstract patient charge ledgers at a reasonable cost ranging, among hospitals, from $12.50 to $50.00 per 100 abstracts, or an average of $25.00 per 100 abstracts.

A continuous program for abstracting patient charge and source-of-payment data can be established as a part of the Hospital Discharge Survey since it is possible for NCHS to:

Use the same patient sample for patient charge and medical data abstracting, except for well-newborn infants when their charges are combined with the mother's on the same ledger.

Match the abstracts of patient charge data with abstracts of medical data for the same patient, even though the two sets of data will not be available at the same time.

Obtain the cooperation of the great majority of hospitals in a continuous abstracting program, provided the approach to the hospitals is carefully planned and personal in nature, and the time required of hospital personnel is held to a minimum by careful planning of hospital time requirements and by training of hospital personnel by survey

staff. NCHS and U.S. Public Health Service prestige is sufficient to stimulate hospital cooperation, although hospital association endorsement should be obtained if possible.

Prior to initiation of a program of abstracting patient charge information on a continuing basis, NCHS should develop detailed procedures for:

Abstracting patient charges in hospitals with automated patient charge systems.

Assuring that the same sample of patients is selected for patient medical and patient charge data abstracting. (Alternative methods available to NCHS are evaluated in subsequent chapters of this report.)

Linking medical record abstracts and patient charge record abstracts, once completed, for the same patient and same admission since the two abstracts will be prepared at different points in time. (Alternative methods available to NCHS are evaluated in subsequent chapters of the report.)

Ensuing chapters of this report discuss in greater detail the study methodology, the major characteristics of hospital patient charge systems, and the feasibility of abstracting patient charges on a continuing basis.

II. STUDY METHODOLOGY

This chapter describes the methodology employed to conduct the pilot study on hospital patient charge statistics. Basic methodology consisted of the following steps:

Development of an interview schedule (Appendix C).

Administration of the interview schedule through direct interviews with hospital administrators and key accounting department personnel in 25 hospitals—20 hospitals not participating and 5 participating in the present NCHS Hospital Discharge Survey. The interview schedule was administered by three members of the study team, with one member responsible for conducting 15 of the 25 direct interviews, training the other team members, and closely supervising their work.

Development of an abstract form (Appendix D) for eliciting patient charge and source-of-payment data according to the following prescribed categories.

Patient Charges

Room and board charges
Other charges
Total charges

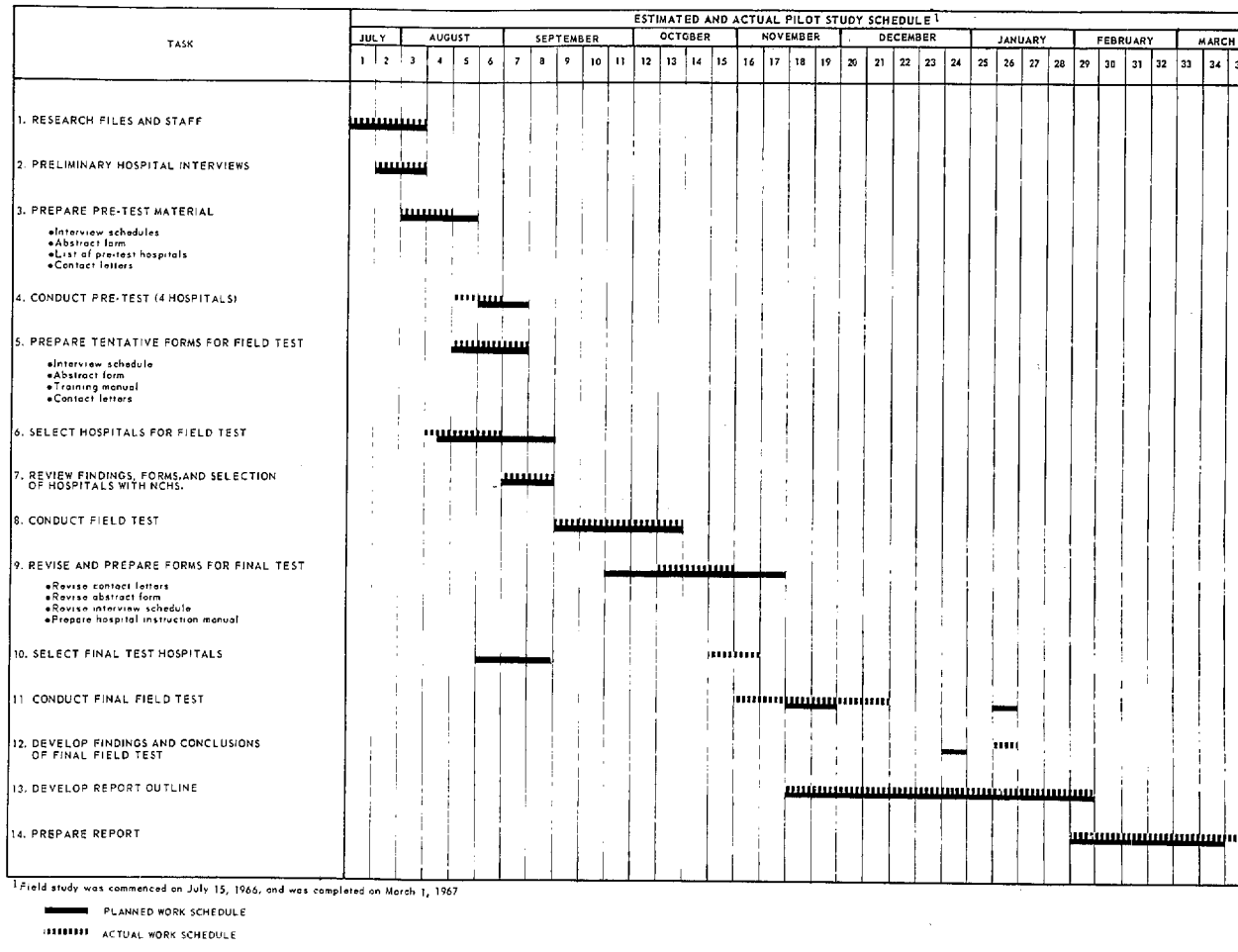
Sources of Payment

Blue Cross
Commercial insurance
Personal payments
Welfare (Title XIX—Medicaid)
Hospital discounts
Private charity
Medicare (Title XVIII)
Workmen's Compensation
Federal public service programs
Other

Use of the abstract form to abstract patient charge and source-of-payment data from patient charge ledgers in the 25 hospitals. Abstracting was accomplished by members of the study team and personnel from NCHS and the Bureau of the Census in the 20-hospital field test. In the last phase of the study, the final field test, hospital employees in the five hospitals performed the abstracting in accordance with an instruction manual developed by the study team. This abstracting was verified by independent abstracting of the same patient charge ledgers by the survey team.

Exhibit I is a chart depicting the work plan for the study. As outlined in the sections which follow, the study design comprised three major phases and a series of steps to accomplish the objectives of each phase.

EXHIBIT I. WORK PLAN FOR THE STUDY



PHASE I. DEVELOPMENT OF INTERVIEW SCHEDULES, ABSTRACT FORMS, AND PROCEDURES

The objectives of this phase were to:

Obtain a general understanding of patient charge systems in hospitals.

Determine attitudes of hospital personnel concerning the value of the survey and the key factors that would influence a hospital to participate in the pilot study and, later, a continuous program of collecting patient charge data.

Ascertain the opinion of the hospital staff on the following key items which would influence the feasibility and practicality of abstracting charge data: (1) data availability and accessibility, (2) consistency and complexity of patient charge systems, including coding systems used, (3) time within which most patient ledgers are completed and ready for abstracting, and (4) time required for collection of data.

Phase I involved accomplishment of the following steps.

Preliminary Interviews With Knowledgeable Personnel

In this initial step, interviews were conducted with selected administrators and accounting department personnel in four hospitals. In

addition, actual primary patient charge data sources were examined for format, content, and variations and compared with study requirements to determine the availability of data.

Preparation and Pretesting of Survey Material

In this step, the following survey materials were developed:

Procedures for contacting hospitals, following up contacts, and expressing appreciation for participation. Appendix B includes materials developed and used during the study by NCHS and the study team.

An interview schedule for use in interviewing hospital administrators and accounting department personnel.

A data collection (abstract) form in a format adaptable to a broad range of hospital primary data source (patient charge ledger) characteristics.

A list of five hospitals for pretesting of the initial interview schedule and abstract form. The hospitals which were not a part of the present Hospital Discharge Survey were selected on the basis of diversity in type, size, and other pertinent characteristics.

The resulting interview schedule and patient charge abstract form were submitted, as required, to the Bureau of the Budget for approval and subsequently pretested in the five hospitals by a member of the survey team in accordance with the following procedures:

Contact letters from NCHS were sent to the five selected hospitals to explain the purpose of the study and to request cooperaton.

The letter was followed by a personal telephone call from a study team member to each hospital administrator to verify cooperation, arrange for a personal visit, and outline the procedures to be followed during the personal visit.

The interview schedule was administered by direct interview with each hospital administrator, and with accounting managers or designated employees in the accounting department, if the administrators were not able to answer the detailed technical questions on accounting procedures.

Approximately 100 patient charge records were selected in each hospital—75 randomly from the hospital's daily patient discharge listing for the most current 4-month period and 25 purposively for the types of patient charge records which were identified as potential problem areas (e.g., welfare, Workmen's Compensation, Medicare, and automobile accident cases) during the interviews with hospital administrators and accounting department personnel.

Hospital personnel in the accounting department of each hospital searched their files to locate the 100 selected ledgers.

A study team member completed abstracts for the selected ledgers, asked questions whenever necessary, and made notes regarding portions of the abstracting process which would necessitate changes in the study procedures, the abstract form, or the interview schedule. Because some records could not be located, slightly fewer than 100 ledgers were abstracted in each hospital.

Letters of appreciation were sent to the participating hospitals.

Modification of Forms and Instructions for Use in the Field Test

This step involved preparation and review of findings from the pretest phase of the study, revision of the interview schedule and abstract form based upon the findings of the pretest, and preparation of an interviewer's instruction manual for the additional study staff to be used in conducting the field test involving 20 hospitals.

PHASE II. ADMINISTRATION OF THE FIELD TEST

The objectives of Phase II of the study were to:

Determine the availability and accessibility of hospital patient charge and source-of-payment data in a sample of 20 hospitals not presently participating in the Hospital Discharge Survey.

Determine hospital procedures for handling patient charge and source-of-payment data and delineate problems in linking patient charge ledger and medical record data in a continuous program to collect patient charge information.

Ascertain the likelihood of hospital cooperation in a continuous program of collecting patient charge statistics.

Test and refine the interview schedule, abstract form, and procedures developed during the pretest phase of the study.

The following steps were accomplished in this phase.

Exhibit II. Hospital characteristics prescribed for the field test

Type of hospital	Number of hospitals in field test
Total hospitals	20
Nonfederal Government	
Large teaching[1]	1
Large nonteaching	1
Not large urban	1
Not large rural	1
Nonprofit church	
Large	1
Not large urban	1
Not large rural	1
Other nonprofit	
Large teaching	1
Large nonteaching	1
Not large urban	1
Not large rural	1
Proprietary	
Large	2
Not large urban	2
Not large rural	2
Special types	
Osteopathic	1
Hospital participating in a prepaid group practice plan	1
Specialty hospital, such as a hospital for crippled children	1

[1] A large hospital is one with 500 beds or more.

One of each of the following kinds of hospitals was to be included among the 20 listed above.

(a) Hospital owned by physicians or by an industrial corporation
(b) Hospital with a highly automated record system
(c) Hospital with an all-inclusive charge rate
(d) Hospital with long-term care, psychiatric, or other specialized units
(e) Hospital in which radiologist, pathologist, etc., bill separately for their departments

Selection of Hospitals

In the first step 20 hospitals, not presently included in the Hospital Discharge Survey, were selected for the field test. The characteristics of the 20 hospitals, as prescribed by NCHS, are presented in Exhibit II. As reflected in Exhibit II, the purpose was to select a broad, representative sample of hospitals in the United States. The hospitals therefore represented a range in size, location (regional distribution was as follows: East, 6; Midwest, 4; South, 5; and West, 5), ownership, accounting equipment, patient charge systems, and special characteristics.

In the 20-hospital field test, great effort was made to select hospitals with characteristics identical to those requested. This was not possible in all cases because most large hospitals (500 beds and over) were already in the Hospital Discharge Survey and, therefore, were excluded from the requirements of the field test. In addition, the number of 500-bed church-affiliated and 500-bed proprietary hospitals is quite limited.

The following variations in characteristics of hospitals selected for the field test were approved by NCHS, since it was felt that the variations would not affect the outcome of the study.

Nonprofit church—a 472-bed hospital substituted for a 500-bed hospital.

Other nonprofit—a large teaching hospital substituted for a large nonteaching hospital.

Proprietary—A 174-bed hospital substituted for a 500-bed hospital.

Exhibit III, summarizes the specific characteristics of the 20 field test and 5 final test hospitals.

Administration of Interview Schedule

In the next step, the interview schedule used in the 20-hospital field test (see Appendix C) was administered by three members of the survey team. The member who conducted the pretest administered the direct interviews in 10 hospitals and trained and closely supervised the performance of the two other members in the remaining hospitals. Administration of the interview schedule consisted of an introductory interview with the administrator, a followup interview with the accounting manager or designated person in the accounting department, and completion of the interview schedule by the interviewer.

Information about the hospitals and their patient charge procedures was collected from interviews with 52 hospital employees, including 2 medical directors, 19 hospital administrators, 20 controllers, 6 business managers, and 5 accounting supervisors.

Abstraction of Data on Patient Charges

This step involved the completion of approximately 100 abstracts in each hospital by members of the study team accompanied in some cases by personnel from NCHS and the Bureau of Census. (See Appendix D for the abstract form used.)

In the field test (20 hospitals) and final test (5 hospitals) more than 1,000 abstracts of patient charge ledgers were completed. Of 2,084 patient ledgers identified by random and purposive selection, 1,064 were abstracted because they were completed. Exhibit IV analyzes the ledgers reviewed during the study.

23 of the 25 survey hospitals produced ledgers for review. One hospital had a computer-based patient charge system that would have required programming to collect patient charge data and the other hospital was in the process of converting from a manual to a bookkeeping machine system and ledgers were not available.

2,038 ledgers were requested from the hospitals for review.

2,084 ledgers were searched for, of which 1,904 were located. (One hospital searched for more ledgers than requested.)

Of the 1,904 ledgers that were located, payments had been completed for 1,064, which therefore could be abstracted.

Exhibit III. Hospital characteristics observed in the 25 survey hospitals

Hospital	Number of beds	Type of ownership	Type of posting equipment	Type of charge system	Geographic location	Special characteristic
Total-	...	G - 5 V - 11 VC - 3 P - 6	C - 3 T - 1 B - 19 M - 2	A-I- 4 S&S-21	M - 4 E - 10 S - 6 W - 5	
Field test hospitals						
1----------	704	G	C	A-1	M	Psychiatric unit, teaching
2----------	762	G	T	A-1	E	
3----------	160	G	B	S&S	S	
4----------	75	G	B	S&S	W	
5----------	472	VC	C	S&S	S	Long-term care unit
6----------	249	V	B	S&S	S	
7----------	126	VC	B	S&S	M	
8----------	656	V	C	[1]S&S	E	Rehabilitation service, teaching
9----------	460	V	B	A-I	E	Teaching
10----------	348	V	B	S&S	S	Psychiatric unit, teaching
11----------	141	V	B	S&S	M	Progressive patient care
12----------	174	P	B	S&S	E	Doctor-owned
13----------	140	P	B	S&S	W	Doctor-owned
14----------	87	P	B	S&S	W	Doctor-owned
15----------	46	P	M	S&S	W	Doctor-owned
16----------	44	P	B	S&S	W	Community-owned
17----------	72	P	B	S&S	E	Corporation
18----------	42	V	B	S&S	E	Osteopathic hospital
19----------	180	V	B	S&S	M	Prepaid group plan
20----------	112	V	B	S&S	S	Crippled child care
Final test hospitals						
21----------	289	VC	B	S&S	E	
22----------	91	V	B	S&S	E	
23----------	145	V	M	A-I	E	
24----------	244	V	B	S&S	E	
25----------	1,298	G	B	S&S	S	Teaching

[1] Welfare patients have an all-inclusive rate.

Legend:

Type of ownership
- G = Government
- V = Voluntary, nonprofit
- VC = Voluntary, church
- P = Proprietary

Type of posting equipment
- C = Computer
- B = Bookkeeping machine
- T = Tabulator
- M = Manual

Type of charge system
- A-I = All-inclusive daily rate
- S&S = Charge according to supply or service received

Geographic location
- M = Midwest
- E = East
- S = South
- W = West Coast

Modification of Forms and Procedures for Use in Final Field Test

This step involved the development of findings and conclusions from the 20-hospital field test, and the design of an instruction manual to be adapted to each individual hospital by a survey team member for use by hospital employees in the final field test (Phase III). In addition, this procedure included the revision of the interview schedule and abstract form, based upon the experience of the 20-hospital field test.

PHASE III. ADMINISTRATION OF THE FINAL FIELD TEST

The objectives of the third and final phase of the study were to:

Test the applicability of forms and procedures developed during the 20-hospital field test,

Exhibit IV. Patient charge ledgers reviewed

Hospital	Total ledgers requested		Total ledgers		Total ledgers found	
	Randomly selected	Purposively selected	Found	Not found	Information complete	Information not complete
Total	2,038		[1]2,084		1,904	
	1,649	389	1,904	180	1,064	840
Field test hospitals						
1	84	6	65	25	6	59
2	80	20	98	2	32	66
3	77	23	97	3	61	36
4	74	25	96	3	43	53
5	82	18	100	-	42	58
6	75	25	97	3	55	42
7	76	24	99	1	32	67
8[3]	---	---	---	---	---	---
9	90	10	68	32	40	28
10	72	31	103	-	58	45
11	73	26	82	17	35	47
12	89	8	66	31	58	8
13	74	26	98	2	48	50
14	75	25	98	2	47	51
15	80	20	100	-	59	41
16[3]	---	---	---	---	---	---
17	72	28	93	7	49	44
18	75	25	93	7	58	35
19	75	25	75	25	3	72
20	79	24	103	-	92	11
Final test hospitals						
21	53	-	45	8	45	-
22	50	-	41	9	40	1
23	47	-	47	-	46	1
24	47	-	45	2	41	4
25	[4]50	-	95	1	74	21

[1]Difference between total ledgers requested and total ledgers accounted for by extra ledgers from hospital No. 25.

[2]Computer system, charge data on magnetic tape.

[3]In process of conversion to computer system. Ledgers not available.

[4]50 ledgers were requested in hospital No. 25 but 96 were searched for.

including procedures for preparing an instruction manual for use by hospital employees who would perform the records abstracting.

Determine the accuracy and validity of the abstracts prepared by hospital employees by having a study team member independently abstract the same patient charge ledgers.

Develop findings and conclusions on the feasibility and practicality of establishing a continuous program for collecting patient charge and source-of-payment data as a part of the Hospital Discharge Survey.

Phase III included the following steps.

Selection of Five Hospitals

In the first step, five hospitals already participating in the Hospital Discharge Survey were selected for testing the accuracy and validity of patient charge abstracting by hospital personnel. (See Exhibit III for characteristics of these hos-

pitals.) Hospitals with computerized accounting systems were excluded as a result of findings from the field test that special programming was required to retrieve the necessary patient charge and payment data from automated sources, and that consequent delays would be encountered.

Administration of the Interview Schedule

In step 2, a general interview was conducted by a study team member with each hospital administrator, and a followup interview was held with the accounting manager or a designated employee in the accounting department.

Preparation of the Instruction Manual

In this step, a member of the study team:

Modified the basic instruction manual to make it applicable to the individual hospital and to guide the hospital employee involved in selecting and abstracting patient charge ledgers.

Adapted the manual to each hospital. This was made possible by a format which listed alternative instructions from which the pertinent instruction for the individual hospital could be selected. (See Appendix E for Hospital Instruction Manual.)

Explained the instruction manual to the selected hospital employee and demonstrated abstracting procedures.

Supervised the completion of two or three abstracts by the hospital employee, for training purposes, and answered any questions.

Provided the hospital with a supply of blank abstracting forms and the names of patients whose patient charge ledgers were to be abstracted. These names were selected from the list of patients whose medical records had been previously abstracted for the Hospital Discharge Survey.

Abstraction of Records by Hospital Employees

An employee in each of the five hospitals utilized the instruction manual and prepared approximately 50 abstracts of patient charge ledgers after the study team member had left the hospital. (See Exhibit IV for data on ledgers abstracted.)

Audit of Abstracting Performed by Hospital Personnel

The last step of the study consisted of a return visit to each hospital by a study team member for the purpose of:

Independently abstracting the same patient charge ledgers that had been abstracted by the hospital employee.

Comparing abstracts completed by the hospital employee and the team member to determine the accuracy and validity of data collected by the hospital employee.

Revising forms and instructions based on findings from the audit of hospital employee performance.

LIMITATIONS IN PILOT STUDY

Principal limitations in the pilot study on hospital patient charge statistics were the following.

Hospitals with automated patient charge systems were not analyzed in depth in the study because special programming would have been required to retrieve the patient charge data to be abstracted.

It was not possible to include the number of large hospitals prescribed for the field test (six) because most large hospitals were al-

ready participants in the Hospital Discharge Survey and because the number of large church-affiliated and proprietary hospitals is very limited.

The purpose of the survey was to conduct a "one-time" study of short duration, and therefore the survey did not test the extent of hospital cooperation for a continuing program of abstracting hospital patient charge data. Also, the study did not provide conditions for preparing the staffing requirements, procedures, and forms for an ongoing abstracting program as compared with a "one-time" program.

The analysis of the patient charge data collected in the small sample of 25 hospitals cannot be considered representative of the total universe of hospitals in the United States.

III. MAJOR CHARACTERISTICS OF PATIENT CHARGE SYSTEMS IN HOSPITALS

The purpose of this chapter is to describe patient charge systems as observed in the 25 test hospitals prior to the presentation of findings and conclusions on the feasibility of initiating a program of abstracting patient charge data on a continuing basis. The chapter provides information on the major components of patient charge systems relating to the format and content of a completed patient charge ledger, and the procedures for creating, updating, and maintaining patient charge ledgers in hospitals.

TYPES OF HOSPITAL PATIENT CHARGE SYSTEMS

Two major types of patient charge systems were observed in the surveyed hospitals—the itemized charge system wherein a charge is posted to the ledger for each supply and service provided to the patient, and the all-inclusive per diem rate system wherein all patients are charged the same flat rate per day regardless of the amount and type of supplies and services provided.

THE COMPLETED PATIENT LEDGER

The patient charge ledger is the only hospital record of the supplies and services provided to a patient, the charges made, and the payments received. The information on the ledger is used by the hospital for billing (invoicing) responsible parties for payment and for accounting audits.

A completed patient charge ledger contains the information on all hospital charges to the patient and the dollar amount of these charges as well as all payments received by the hospital, a description of the source(s) of payment, and the dollar amount of responsibility of the source of payment (the source of payment may pay less than its responsibility because of discounts, maximum allowances, etc.). These two items constitute all the data required for patient charge and source-of-payment abstracting.

In addition to information on patient charges and source of payment, the patient charge ledger also includes the patient's name, admission number, and admission and discharge dates. These three items comprise all the information needed to locate a patient's charge ledger in the file and to verify that the ledger is for the same patient and admission selected for patient charge abstracting.

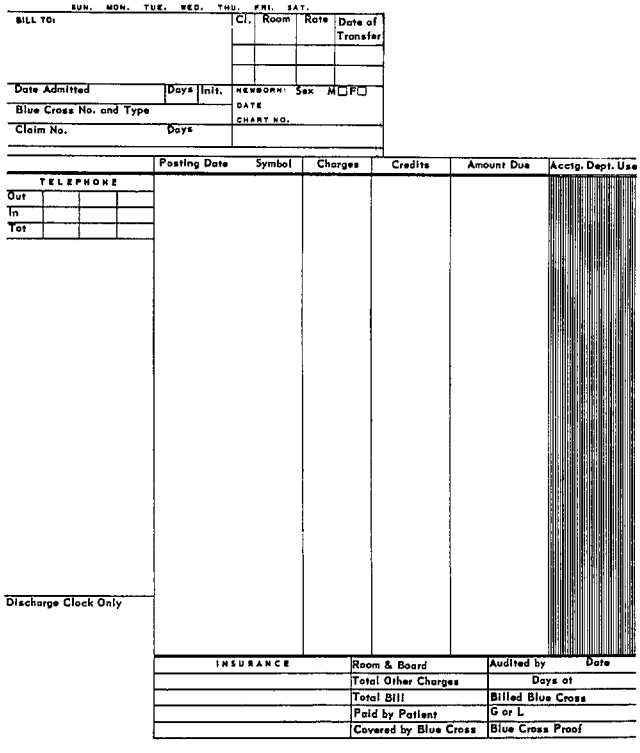
A completed ledger frequently contains other information such as admitting diagnosis, attending physician's name, type of accommodation, etc., but this information is not necessary for patient charge and source-of-payment abstracting.

Information on patient ledgers was relatively constant among the survey hospitals, but significant variations existed in the following areas:

Ledger Format

Some hospitals use single-column ledgers, whereby descriptions of all charges and payments

EXHIBIT V. SAMPLE OF SINGLE COLUMN PATIENT CHARGE LEDGER



are placed in the same column and usually are posted consecutively by date of occurrence. These postings may use color (red) or symbol codes for denoting debits or credits. Other hospitals use multiple-column formats, whereby charges are posted to specific prelabeled columns (e.g., column may be labeled "laboratory"). Again, the postings are consecutive by date. In hospitals using multiple-column ledgers, a description of the source of payment is usually spread across several columns unless the source is coded, in which event any column can be used. Exhibit V is a sample single-column ledger, and Exhibit VI is a sample multicolumn ledger.

Equipment Used for Posting

The design and format of a hospital's patient ledger is usually controlled by the type of accounting equipment used by the hospital. Three types of equipment were observed.

Bookkeeping machines.—Entries are manually typed and automatically calculated.

Tabulators.—Entries are manually typed on cards via keypunch and fed into the tabulating equipment, which automatically posts, calculates, and prints charges and sources of payment on the patient charge ledger.

Computers.—Entries are manually typed on cards via keypunch and converted to magnetic tape from which calculations are made on charges and sources of payment.

Among the surveyed hospitals, bookkeeping machines were by far the most frequently used type of equipment.

Number of Postings Made

Hospitals with all-inclusive rates often post only one charge on a ledger, whereas hospitals with itemized charge systems post for each individual charge made. Variation among the hospitals using itemized systems is significant because room and board charges may be posted daily or only once per patient stay. While personal charges, such as telephone and television service, may be posted daily, once per patient stay, or may not be posted at all since they may be billed separately, included in other charges, or not provided.

Extent of Computations

Grand totals for room and board and personal charges may or may not be shown on the ledger.

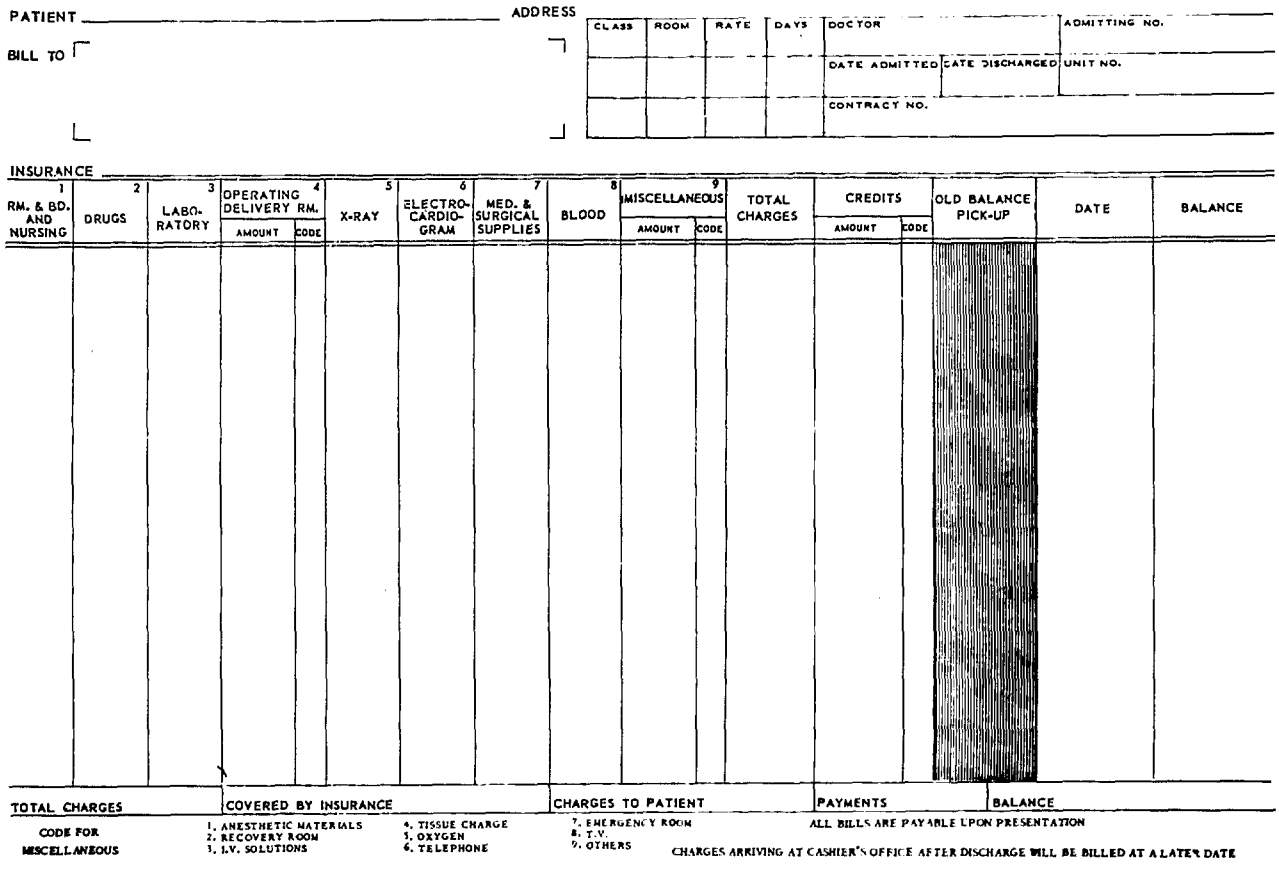
Method of Describing Charges and Sources of Payment

Hospitals may describe the type of patient charge or source of payment on the ledger by spelling out in full or abbreviated form or by alphabetical or numerical code.

Method of Handling Writeoffs

Some sources of payment (e.g., Blue Cross, commercial insurance paying for Workmen's

EXHIBIT VI. SAMPLE OF MULTIPLE COLUMN PATIENT CHARGE LEDGER



PATIENT _____ ADDRESS _____

BILL TO

CLASS	ROOM	RATE	DAYS	DOCTOR	ADMITTING NO.
				DATE ADMITTED / DATE DISCHARGED	UNIT NO.
				CONTRACT NO.	

INSURANCE

1 RM. & BD. AND NURSING	2 DRUGS	3 LABORATORY	4 OPERATING DELIVERY RM. AMOUNT	4 CODE	5 X-RAY	6 ELECTRO-CARDIOGRAM	7 MED. & SURGICAL SUPPLIES	8 BLOOD	9 MISCELLANEOUS AMOUNT	9 CODE	TOTAL CHARGES	CREDITS AMOUNT	CREDITS CODE	OLD BALANCE PICK-UP	DATE	BALANCE

TOTAL CHARGES	COVERED BY INSURANCE	CHARGES TO PATIENT	PAYMENTS	BALANCE

CODE FOR MISCELLANEOUS
1. ANESTHETIC MATERIALS
2. RECOVERY ROOM
3. I.V. SOLUTIONS
4. TISSUE CHARGE
5. OXYGEN
6. TELEPHONE
7. EMERGENCY ROOM
8. T.V.
9. OTHERS

ALL BILLS ARE PAYABLE UPON PRESENTATION
CHARGES ARRIVING AT CASHIER'S OFFICE AFTER DISCHARGE WILL BE BILLED AT A LATER DATE

WE-30

THE DATES INDICATED FOR THE ABOVE CHARGES ARE THE DATES THEY WERE RECORDED AND ARE NOT NECESSARILY THE DATES ON WHICH THE SERVICES WERE RENDERED.

Compensation, and welfare) often do not pay the hospital the full amount of their dollar responsibility. When posting these discounted payments, some hospitals show both the amount of the payment and the writeoff. Other hospitals post only the amount of the actual payment to the ledger and subtract the full amount of the responsibility.

All patient charge ledgers, regardless of the patient charge system, accounting equipment, or ledger format used, provided for the posting of dollar amounts in the form of debit or credit entries. Charges for supplies and services provided patients were posted as debits. Payments for such supplies and services provided are posted as credits. All debits are added to the balance due and all credits are subtracted.

PROCEDURE FOR CREATING, UPDATING (POSTING), AND FILING PATIENT CHARGE LEDGERS

Creating Patient Charge Ledgers in Hospitals

The patient charge ledger is usually created by a clerk in the admitting or accounting office at the time the patient is admitted to the hospital. However, in many hospitals, the admitting office is managed by the controller or business manager since the major portion of the admitting information is obtained for the hospital's accounting department.

The patient's name and address, admission number and date, and name and policy number of the responsible source of payment, if other than the patient are recorded on the ledger at the time of creation. (This information may be first recorded on an admitting form and then transferred to the ledger.)

The necessary information is usually typed or written in the heading portion of the ledger. In computerized hospitals, this information is obtained in the admitting office and later keypunched and entered into the system through a card-to-tape converter.

Posting Charges to the Patient Charge Ledger

All charges for supplies and services provided, for which the hospital expects to receive payment, are posted to the ledger by a posting clerk in the accounting department. On a multiple-column ledger, dollar amounts of the charges are posted to the column prelabeled for that charge or type of charge. On a single-column ledger, the dollar amount for each charge is posted to the single column.

In hospitals using itemized charge systems, charges are posted to the patient's charge ledger usually within 24 to 48 hours after the supply or service is provided. Charge slips are prepared for each supply and service by the servicing departments. These slips are then forwarded to a posting clerk in the accounting department, who transfers (posts) the information from the charge slip to the patient's ledger. The following entries constitute a typical posting operation—date of posting, description of the charge, amount of the charge, and amount of the new balance due. This operation is repeated until all charges are posted to the patient's charge ledger.

In hospitals with all-inclusive rates, charges are usually posted to the ledger only on the day the patient is discharged. The amount to be posted is calculated by determining the number of days the patient remained in the hospital and multiplying this figure by the all-inclusive rate. The resulting total is then posted to the patient charge ledger.

Posting Payments to the Patient Charge Ledger

All payments received by the hospital for supplies and services provided are posted to the patient's ledger by a posting clerk in the accounting department. Payments are posted as soon as they are received by the hospital, and the procedure is the same regardless of the type of charge system.

The patient charge ledger for which a payment is received is removed from the active ledger file and given to a posting clerk with the payment information. Then the dollar amount of the payment is posted as a credit, and the source of payment is spelled out or a code is employed for the entry. The following entries will be made in posting a payment—date of posting, a description of the party making the payment, the amount of the payment, and the amount of the new balance. This procedure is repeated as each payment is received until all charges are paid.

Filing the Patient Charge Ledgers

A hospital maintains a series of files for patient charge ledgers. The particular file within which a patient charge ledger is placed depends upon whether all charges have been posted and all payments have been received or whether payments are substantially overdue. While a patient is in the hospital and for a short time after his discharge, ledgers are kept in a file for accounts in which all charges have not been posted. After posting is complete, the patient ledger may be found in one of several files, depending on the status of the account. To find a patient ledger for a discharged patient, therefore, several files may need to be searched. Ledgers are filed alphabetically by the patient's last name in each file.

Patient charge ledgers are maintained in the following hospital files:

The open file, maintained by a clerk responsible for posting, contains files for which all charges have not been posted.

The active file, maintained by a clerk responsible for accounts receivable, is composed of ledgers for which all charges have been posted but for which payments are still due.

The agency file, maintained by an accounts receivable clerk, consists of accounts substantially past due that have been referred to collection agencies. A hospital may not always keep a record of individual ledgers missing from its files that have been transferred to a collection agency.

The completed file, maintained by a ledger file clerk, is composed of ledgers for which all charges have been posted and payments made.

The size of the hospital determines the number of personnel involved in posting charges and payments and maintaining ledger files. In small hospitals one person may perform all functions whereas in larger hospitals one or more persons may be responsible for each activity.

IV. FEASIBILITY OF ABSTRACTING PATIENT CHARGES ON A CONTINUING BASIS

The analysis of the data from the 25 hospitals included in the pilot study permits findings and conclusions to be made on issues of abstracting in a broad spectrum of noncomputerized hospitals of different size, location, and type. Such an analysis can assist in deciding the feasibility of abstracting patient charge data on a continuing basis for a larger national sample of hospitals.

MAJOR ISSUES IN ABSTRACTING PATIENT CHARGE LEDGERS

Issue 1	*Can patient charge ledgers and medical records be abstracted for the same sample of patients and admissions?*

Findings

A patient charge ledger was prepared for each patient and for each admission except newborn infants in the hospitals. Charges for well-newborn infants who were discharged from the hospital at the same time as the mother were posted to the mother's ledger in 22 of the 25 hospitals. (Three hospitals prepared separate ledgers for newborn infants.) In hospitals using single ledgers for both the mother and child, it is impossible to distinguish from the ledger whether certain charges are for supplies or services provided to the mother or to the child (e.g., drugs, special nursing, and central supplies).

Of the ledgers requested, 8.5 percent were not found. Major reasons for not finding all requested ledgers in the 25 hospitals were as follows:

Hospital employees locating the ledgers often searched only one hospital file for a ledger.

Ledgers filed in separate facilities were not searched for. (These were usually completed ledgers for which all payments had been received.)

In the 20-hospital field test, some ledgers were requested for patients discharged within the previous few days, and the hospital did not wish to remove these ledgers from the open file.

Limited time available in the 20-hospital field test did not permit an extensive search of the files. In the five final test hospitals where sufficient time was provided, two hospitals with problems in locating ledgers were certain that the ledgers had been transferred to a collection agency.

Conclusions

It is possible to use the same sample of patients and admissions for patient charge and medical record abstracting except for well newborn infants, whose charges are usually combined with and are often indistinguishable from those of the mother on the same ledger.

In a "one-time" study, such as the pilot study, missing ledgers are a problem. The ledgers are not lost, but are difficult to locate since they may be kept in files (particularly the closed file for completely paid accounts and the collection agency file for overdue accounts) that are placed in separate facilities or at some distance from the accounting department. In a continuing abstracting program, however, the percentage of ledgers not found should not be significant for the following reasons:

Hospital employees will have more time and will search more thoroughly for all ledgers requested.

Ledgers for recently discharged patients will not be included.

Ledgers will be abstracted in the hospital accounting department before being transferred to separate facilities.

Ledgers transferred to collection agencies will be abstracted after they are returned to the hospital.

Issue 2 *Can patient charge and medical records data abstracts, once prepared, be matched for the same patient and admission?*

Findings

Abstracting medical records and patient charge data can only be done when the source record is complete.

Medical records and patient ledgers are completed at different times in most hospitals. Medical data originate in the medical records department and are usually available 2 to 4 weeks after the patient is discharged. Charge and source payment data originate in the accounting department and are usually available in 90 percent of the hospitals within 60 days after discharge for 90 percent of the patients. This was determined by direct questioning of the hospital accounting managers and then verified by the study staff during actual abstracting in the 20 field test hospitals. In the five final test hospitals, all ledgers requested were for patients discharged 60 days or more earlier; in four of the five hospitals 90 percent of the ledgers were complete. In the other hospital, welfare, whose payments are frequently delayed, was the predominant source of payment, resulting in the high percentage of incomplete ledgers.

Conclusions

Patient charge and medical records data are not available at the same time, but it is possible to match the two data sets. This can be done in three locations—in the hospital by the accounting department, in the hospital by the medical records department, and in Washington, D.C., by NCHS.

Since medical records and patient ledgers for the same patient are generally completed at different times, separate lists of patients selected for patient-charge-ledger and medical-record abstracting will be required in a continuing abstracting program. Unless arrangements are made to rely upon the coordination of the two surveys within each hospital, both the medical records and account departments will have to prepare separate listings of patients sampled for later cross-matching by NCHS.

Issue 3 *Can room and board charges be identified on patient charge ledgers?*

Findings

Patient ledgers in hospitals that charge according to each supply and service provided have room and board charge data identified separately on the ledger. Room and board charge data do not exist on patient ledgers in hospitals that charge an all-inclusive per diem rate. Some of these hospitals have cost accounting breakdowns of the all-inclusive rate which can be used to calculate per diem room and board charges. The all-inclusive-rate hospitals that do not have cost accounting can provide estimated room and board charge data which they already supply to third-party payors upon request.

Four of the 25 hospitals used all-inclusive-rate charge systems. In two of these hospitals room and board charges had been determined by cost accounting, and in the other two such charges could only be estimated.

Conclusions

Accurate room and board charge data can be identified in all hospitals that charge according to each supply or service provided and in all-inclusive-rate hospitals where cost accounting exists.

The room and board charge data obtained from all-inclusive-rate hospitals without cost accounting breakdowns will be estimates of actual charges.

Issue 4 Are items included in room and board charges consistent among all hospitals?

Findings

In most survey hospitals the room and board charge was generally considered a catchall item. Any item that is not separately charged for is incorporated in the room and board charge.

The major portion of the items which is included in room and board was consistent among the hospitals surveyed. The following supplies and services were included in room and board charges in all 25 survey hospitals—room, food (routine and special diets), routine nursing, laundry (linens, etc.), overhead (administration and supervision), and building and building equipment (maintenance of facility, depreciation, heat and light, etc.).

These supplies and services, consistently included in the room and board charge of all survey hospitals, constitute the bulk of items and prices in the room and board charge. Laboratory services were excluded from the room and board charge in all 25 hospitals. Exhibit VII analyzes variations in selected items included in room and board charges in the 25 hospitals.

Conclusions

There is sufficient consistency in the elements that make up room and board charges to permit gross comparison of room and board charges among hospitals. In all hospitals, the room and board charge includes the same major items including room, food, routine nursing, laundry, administrative overhead, and building and equipment maintenance.

Issue 5 Can charges other than room and board (other charges) be identified on patient ledgers?

Findings

Although per diem room and board charges are usually similar for all patients in hospitals which charge for each supply and service provided, other charges will vary from patient to patient according to the type and amount of supplies and services provided. Other charges can be most easily computed by subtracting room and board charges from total charges less personal charges on the patient ledger.

Other charges in all-inclusive-rate hospitals can be computed on an *average* per diem basis for all patients; in other words, other charges in all-inclusive-rate hospitals will be the same per day for all patients.

Conclusions

Other charges can be computed in all hospitals, but only accurately for each patient in hospitals that charge according to each supply and service provided. Therefore, comparison of other charges among patients (e.g., by diagnosis, length of stay, etc.) will be reasonable only in hospitals which charge according to each supply and service provided; such comparisons will not be meaningful among all-inclusive-rate hospitals since per diem other charges will be the same for all patients.

Issue 6 Are items included in other charges consistent among all hospitals?

Findings

Only supplies and services billed for by the hospital are included in other charges on the patient charge ledgers. Exhibit VIII summarizes the variations of items billed for as other charges in the 25 hospitals.

Not all supplies and services provided in the hospital are billed for by the hospital. Supplies and services may be billed for by various other parties, including physicians, private nurses, hospital auxiliary groups, and agencies other than hospitals.

Exhibit VII. Variations in supplies and services included in room and board charges in 25 survey hospitals

Hospital	Drugs		Special equipment and services					
	Routine	Special	Surgical dressing	Recovery room	Intensive care	Intravenous feeding	Blood setups	Oxygen setups
1		X				X	X	X
2	X	X	X				X	X
3	X	X	X	X	NP	X	X	X
4		X	X	X	NP	X	X	
5		X	X	X	NP	X		
6		X		X		X	X	X
7	X	X	X	X	NP	X	X	X
8				X	NP	X	X	X
9		X		X	X		X	X
10		X		X	NP	X	X	X
11		X	X		X	X	X	X
12		X	X	X		X	X	X
13		X	X		X	X	X	X
14	X	X	X		NP	X	X	X
15		X	X	X		X	X	X
16		X	X		X	X	X	X
17		X	X	X	X	X		X
18	X	X	X	X	NP	X	X	X
19		X			X	X	X	X
20		X	X	X	NP	X	X	X
21		X	X	X	NP	X	X	X
22		X	X	X	NP	X	X	X
23				X	X		X	X
24		X	X	X		X	X	X
25		X		X	X	X	X	X
Percent of hospitals[1]	20	92	68	72	57	88	92	92

[1]Percent of hospitals for which each supply or service is not included in room and board.

NOTE: The following supplies and services were included in the room and board charge in all 25 survey hospitals: room, food (routine and special diets), routine nursing, laundry (linens, etc.), and overhead (administration, supervision), building and building equipment (maintenance of facility, depreciation, heat and light, etc.). Laboratory services were excluded from the room and board charge in all 25 survey hospitals.

Legend: X = Supply or service not included in room and board charge.
NP = Supply or service not provided by the hospital.

Items for which the hospitals bill under other charges are constantly changing because of new programs (e.g., Medicare), decisions to separate or combine billings with those of the hospital (e.g., pathology and radiology), and changes in accounting standards.

Medicare may increase the frequency of billing by parties other that the hospital for supplies and for services provided in the hospital because of its required separation of charges for certain services such as pathology and radiology.

Conclusions

Not all other charges for supplies and services received by the patient in a hospital will be included on the hospital's patient charge ledger. Although variations occur among hospitals on the items they include in the category of other charges, gross comparisons of other charges among hospitals can be made since significant variations occur only for a few items, particularly for anesthesia services. Comparisons can be made more meaningful by obtaining periodic information from each hospital on what items they include in other charges.

Issue 7 Can charges for blood be identified on patient ledgers?

Findings

Charges for blood were posted to the patient's ledger in 23 of the 25 survey hospitals. In the two

Exhibit VIII. Method of billing for selected other charges

Hospital	Pathology	Radiology	Anesthesiology	Blood	Surgeon's fees	Regular physician visits	Private duty nursing
Field test hospitals							
1	H	H	O	H	O	O	O
2	H	H	H	H	O	O	O
3	H	H	H	H	O	O	O
4	H	H	O	HM	O	O	O
5	H	H	O	H	O	O	O
6	H	H	O	H	O	(1)	(1)
7	H	H	HM	H	O	O	O
8	H	H	O	H	O	O	H
9	H	H	O	H	O	O	O
10	HM	HM	HM	H	O	O	O
11	H	H	O	O	O	O	O
12	H	H	H	H	O	O	O
13	H	H	H	HM	O	O	O
14	H	H	H	HM	O	O	O
15	H	H	H	H	O	O	O
16	H	HM	O	HM	O	O	O
17	H	H	O	H	O	O	O
18	H	H	O	H	O	O	O
19	HM	H	H	H	H	H	O
20	HM	H	H	H	O	O	O
Final test hospitals							
21	H	H	O	H	O	O	O
22	H	HM	O	H	O	O	O
23	H	H	H	H	O	O	O
24	H	H	O	H	O	O	O
25	HM	HM	H	H	O	O	O
Percent of hospitals[2]	100	100	48	96	4	4	4

[1]Supply or service is not provided at the hospital.

[2]Percentage of hospitals included that billed for specified charges.

Legend: H = Billed as an individual charge by the hospital.
HM = Billed as an individual charge by the hospital except for Medicare patients where the physician sends a separate bill.
O = Billed separately by the physician, auxiliary group, or agency (other than hospital).

other hospitals, blood was provided free through the community's blood bank. Patients were never billed independently by the blood bank.

The posting of charges for blood is similar to any other charge posting. When blood is provided the charge is posted to the ledger. If blood is paid for by replacement through donors, a credit posting similar to any other credit posting is made.

Conclusions

Identifying charges for blood will be a problem only if hospital blood banks bill the patient directly and the hospital does not post the charge to the ledger. (This did not occur in any of the 25 survey hospitals.) In the hospitals that provide blood free of charge, the charges to the patient are truly reflected on the patient charge ledger since there is no blood charge or payment.

For hospitals which accept or prefer payment for blood through donor replacement (payment in kind), it will be necessary on the patient charge abstract form to record the credits replacements as personal payments.

Issue 8 Can personal (nonmedical) charges be identified on patient ledgers?

Findings

Personal charges noted on patient charge ledgers included those for television and tele-

phone. Personal charges were not hidden in any other hospital charge in the 25 survey hospitals.

Telephone service was provided in 23 of the 25 hospitals and the charges for both long distance and local telephone calls could be identified from the patient's ledger in all 23 hospitals.

Television was provided in 24 of the 25 hospitals. Charges for television, however, could be identified from the patient's ledger in only 11 of the hospitals (44 percent) because an auxiliary group or television service in the other hospitals independently billed the patient for the service.

Conclusions

Television and telephone service are the only frequent personal charges that will be encountered on patient charge ledgers, and these charges can be identified from the patient charge ledger only when the hospital does the billing. The hospital will usually bill for telephone service, but other parties such as auxiliary groups will often bill independently for television.

A continuing program for abstracting patient charge data may require identification of personal (nonmedical) charges since such charges can distort an analysis of patient medical costs. Personal charges should be deducted from total hospital charges before any calculation is made of room and board and other charges. The number of personal charge entries varies considerably among hospitals, and will influence abstracting time significantly in some hospitals.

Issue 9 *Can source of payment of patient charges be easily identified from patient ledgers?*

Findings

Of the 10 sources of payment prescribed for the study, 7 could be identified with consistency from patient charge ledgers in all 25 hospitals and 3 in only some hospitals. They are:

Identified in all hospitals

Blue Cross
Commercial insurance
Personal payments
Welfare (Including Title XIX-Medicaid)
Hospital discounts
Private charity
Medicare (Title XVIII)

Identified in some hospitals

Federal public service programs
Other service programs
Workmen's Compensation insurance

Of the seven sources of payment that can always be identified on patient ledgers, five accounted for more than 97 percent of total payments made to the hospitals.

Major sources of payment	*In percent*
Total	97.4
Personal payments	43.0
Blue Cross	30.2
Commercial insurance	18.0
Welfare	5.5
Medicare (Title XVIII)	0.7

Medicare, which had only been initiated at the time of the study, will account for a greater percentage of payments in the future.

The seven sources of payment most frequently identified in the hospitals (except Medicare) pay the hospital directly. Medicare, paid through an intermediary agent, can be identified easily because the Social Security Administration requires that Medicare payments be marked in red on the ledger.

Workmen's Compensation insurance cannot always be identified from ledgers because it is often paid by commercial insurance or government agencies that may be recorded by the hospital as the source of payment.

Federal public service programs and other service programs also often do not pay bills directly but rather through intermediary agents that are identified as the sources of payment on the patient charge ledger. With special effort Workmen's Compensation often can be identified, but this is not true with Federal public service and other service programs.

Writeoffs (discounts) are frequently made by hospitals for some sources of payment. Discrepancies, therefore, frequently occur between the amount of patient charges for which the source of payment is responsible and the amount that it actually pays.

Personal payments to the hospital by patients often include third-party payments made to the patient as well as his out-of-pocket payments. These third-party payments to patients are rarely recorded on the patient charge ledgers.

Conclusions

Except for Medicare, sources of payment can be accurately identified only when the source pays the hospital directly. Therefore, Workmen's Compensation, Federal public service programs, and other service programs are probably not appropriate sources of payment to use in obtaining accurate information from patient charge ledgers. These three sources, furthermore, accounted for a minor proportion of total payments to the 25 survey hospitals. (See Appendix F for suggested patient charge abstract form for future use.)

Information can be readily obtained for more than 98 percent of the total payments to the hospitals (five of the seven easily identifiable sources of payment accounted for 97.4 percent of the total payments) if it is recognized that the amount of third-party sources of payment will be understated and that personal payments will be overstated, since third-party payments made directly to the patient will be posted as personal payments.

Although personal payments are one of the most frequent sources of payment (43 percent of sources of payment identified on all ledgers), they are often only for personal charges such as television and telephone, which constitute less than one-half of 1 percent of total dollar charges (although they may be significant in some individual cases).

To collect meaningful information on personal payments as a source of payment, a subdivision of personal payments into payments for nonmedical charges (e.g., telephone and television) and payments for medical charges may be required. By dividing this source of payment into two divisions, it will be possible to analyze patient responsibility more objectively and, if desirable, to discount patient responsibility as a source of payment when the payment is for telephone and television only. Also, a provision in the abstract form for a writeoff (discount) for Blue Cross, commercial insurance, and welfare, when the actual payment is less than the source of payment's financial responsibility, may help assure the collection of accurate data on who pays patient charges in hospitals.

Issue 10 Can valid patient charge data be obtained if abstracting is done by hospital employees?

Findings

In the five final test hospitals in which hospital employees and study staff independently abstracted the same patient charge ledgers, employee abstracting errors occurred in 6.2 percent of the abstracts, as follows: Six arithmetic errors, one patient charge overlooked, two figures copied incorrectly, and two incorrect sources of payment recorded.

Most errors found are correctable since arithmetic errors can be controlled by validity checks, and incorrect sources of payment can be avoided by clarification of definition of source of payment in the instruction manual for hospital employees.

Incorrect transposition of figures and overlooked figures cannot be controlled. Uncontrollable errors occurred in only 3 out of 176 abstracts, or 1.7 percent of abstracts completed.

Conclusions

Hospital employees can abstract patient charge ledgers with considerable accuracy if properly trained. Proper training will require personal contact with the hospital employee and the use of a carefully developed instruction manual for teaching and reference.

Issue 11 What will be the cost to hospitals to abstract patient charge data on a continuing basis?

Findings

Average time for a hospital to complete abstracts of patient charge ledgers varied considerably among the survey hospitals. Exhibits IX and X summarize the time required to abstract patient charge ledgers by study staff in the 20 field test hospitals and by hospital employees in the 5 final test hospitals. Average time required to abstract a ledger ranged from 3.1 minutes to 12 minutes for the following reasons:

Accessibility of the files. All files may not be in the same location.

Quality of record maintenance. Files not located averaged 8 percent and ranged from 0 percent to 32 percent among hospitals.

Number of room and board postings. Hospitals may post room and board charges daily or only upon discharge.

Extent of computations on the ledger. Some hospitals have already totaled room and board and personal charges and these figures need only be transposed without computation.

Number of postings. Low number of postings in hospitals with all-inclusive rates makes abstracting easier. Frequency of posting of personal charges (e.g., telephone and television) depends upon hospital systems and policies and will vary considerably.

Ability and familiarity with the procedures. Quality of staff assigned by the hospital and training of these personnel influence the rate of abstracting.

Time required by hospital employees to find and remove patient ledgers from the files averaged 32 percent of total abstracting time for the 25 hospitals and more than 50 percent of abstracting time in several individual hospitals.

The difference in time required by study staff and hospital employees to abstract a patient charge ledger was not great (4.0 minutes for study staff and 4.5 minutes for hospital employees). Hospital employees located ledgers in both parts of the survey, and the average locating time in the field test hospitals (1.9 minutes) was more realistic for future estimates of time requirements because one of the final test hospitals required excessive ledger locating time.

Conclusions

Based upon results of the survey and an assumed employee cost of $2.50 per hour, the cost to the hospital to prepare 100 abstracts will range from $12.50 to $50.00, or an average of $25.00 for 100 abstracts. Reimbursement to hospitals may need to be on a variable rather than a flat rate basis since time for abstracting can vary considerably among hospitals based upon their individual accounting system characteristics.

Issue 12 When will patient charge ledgers be ready for abstracting?

Findings

Since source-of-payment data can only be accurately identified after all payments are received, patient charge ledgers cannot be abstracted until all charges and payments have been posted to the ledger. The time required for this complete posting of payments varied considerably among survey hospitals. The time required after discharge of patients for 90 percent of the ledgers to be completed in the 25 survey hospitals was: within 15 days for 1 hospital, within 30 days for 8, within 60 days for 14, and more than 1 year in 1 hospital. This time lag was determined by direct questioning of the hospital accounting manager and then verified by the study team while abstracting. In 23 of the 25 hospitals, 90 percent or more of the patient charge ledgers were ready for abstracting within 60 days.

Variations among the study hospitals in the time required to complete ledgers primarily result from the degree of efficiency of the hospital's billing procedure and the dominant sources of payment in the hospital (e.g., Blue Cross pays more rapidly than welfare, which often delays payment for months).

Exhibit IX. Time required by study team to abstract patient charge ledgers

Field test hospital	Ledgers reviewed	Time to locate ledgers[1] (hours)	Time to abstract ledgers (hours)	Average time per abstract (minutes)
Total	1,631	50.8	109.1	5.9
1	65	2.0	4.0	5.5
2	98	1.0	4.0	3.1
3	97	5.0	6.6	7.2
4	96	2.0	4.0	3.7
5	100	5.0	6.0	6.6
6	97	2.5	7.5	6.2
7	99	3.0	9.5	7.5
8[2]	---	---	---	---
9	68	4.0	8.0	10.5
10	103	2.5	8.0	6.1
11	82	4.0	4.0	5.9
12	66	2.0	4.0	5.5
13	98	2.0	3.0	3.1
14	98	1.5	4.0	3.4
15	100	2.0	10.5	7.5
16[3]	---	---	---	---
17	93	4.0	6.0	6.5
18	93	2.0	5.0	4.5
19	75	3.0	6.0	7.2
20	103	3.3	9.0	7.2

[1]The locating time is an estimate because this was done by hospital employees while the study staff member was abstracting.

[2]Computer system, charge data on magnetic tape.

[3]In process of conversion to computer system. Ledgers not available.

Exhibit X. Time required by hospital employees to abstract patient ledgers in five final test hospitals

Final test hospital	Ledgers reviewed	Time to locate ledgers (hours)	Time to abstract ledgers (hours)	Average time per abstract (minutes)	Employee completing abstract
Total	273	18.25	20.25	8.5	...
21	45	2.00	1.00	4.0	Accountant
22	41	0.50	4.25	6.9	Clerk
23	47	2.00	1.00	5.1	Controller
24	45	1.75	7.00	11.7	Clerk
25	95	12.00	7.00	12.0	Clerk (insurance department)

In all hospitals payments for certain types of cases (e.g., Workmen's Compensation or automobile accident) may not be received for several years.

Conclusions

More than 90 percent of patient charge ledgers will be complete and ready for abstracting in the great majority of hospitals within 60 days after patient discharge. Availability of completed patient charge ledgers will be significantly delayed in some hospitals (particularly hospitals with a high proportion of welfare patients) and for some cases in all hospitals (e.g., Workmen's Compensation, automobile accident, and welfare).

Issue 13 Will hospitals cooperate in a continuing program to abstract patient charges?

Findings

No hospital approached in the pilot study refused to cooperate, although considerable explanation and persuasion were required to achieve cooperation of several hospitals.

No hospital raised objections to the releasing of patient charge data because of the issue of confidentiality of hospital records.

In the five final test hospitals, certain problems in implementing a continuing abstracting program were identified by hospital personnel, including extensive new manpower and space problems in the accounting department due to Medicare workload and prior commitments to other studies and surveys.

Survey staff found that the most important factors that hospitals will consider in deciding whether to cooperate in a program of continuing patient charge abstracting are the time required by hospital personnel to participate in an abstracting program and the attitude of top hospital administrative staff to the value of providing data to sources outside the hospital.

Conclusions

The great majority of hospitals will cooperate in a continuing program to abstract patient charge data, provided the approach is carefully planned and personal, the time required is held to a minimum by careful planning of hospital time requirements, and training of hospital personnel is conducted by survey staff.

Other factors of somewhat less importance in obtaining cooperation include making equitable financial reimbursement for required hospital time, stressing the national importance of the information gathered from continued abstracting, and providing an advance indication to the hospital of the amount of time required of hospital staff to abstract patient charge ledgers (such estimates can be based on findings of the pilot study).

INTERPRETATION OF FINDINGS AND CONCLUSIONS

In summary, the pilot study of hospital patient charge statistics in 25 hospitals throughout the United States supports the following conclusions.

Conclusion 1 It is feasible to collect patient charge and source-of-payment data

Patient charge data can be abstracted since information is readily available in noncomputer hospitals, valid data can be collected by hospital employees, and patient charge and source-of-payment data can be collected at a reasonable cost.

Conclusion 2 Most of the information collected from an ongoing patient charge abstracting program will be accurate and useful; however, caution must be exercised when using some information

Some incorrect source-of-payment data will be collected because hospitals cannot determine whether personal payments by patients include third-party reimbursement made to the patients. Special studies will be needed to determine the extent of the third-party reimbursement that is made directly to patients.

Patient charge data in all-inclusive-rate hospitals will not reflect the individual patient's treatment requirements because all patients in these hospitals have the same per diem charge. Also, in addition, most all-inclusive-rate hospitals do not have cost accounting, and therefore

patient charge data cannot be broken down accurately between room and board and other charges. Only a limited number of hospitals presently use all-inclusive rates, so this problem is not great.

Items included in room and board charges vary among hospitals, although most of the items (i.e., room, food, and nursing) are consistently included in all hospitals. Therefore, valid comparison of room and board data among hospitals is possible.

Although items included in other charges differ somewhat among hospitals because of variations in items for which the hospitals bill, gross comparisons of other charges can be made since significant variations occur with only a few items. Periodic information from the hospitals regarding items included in other charges can assist in making more accurate comparisons of other charges among hospitals.

Personal charge practices vary among hospitals because of different methods of billing for television. Charges for television may be included on the patient ledger or billed by a separate group or agency. This should not create any major problem because total charges for television account for a very minor percentage of total charges (less than one-half of 1 percent for both television and telephone).

Personal (nonmedical) charges and payments may be eliminated altogether in a continuing abstracting program since they are small in amount. By separately collecting charge and payment data for personal items at the early stages of a continuing program, a decision can be made on whether personal charges should be eliminated in a full-scale abstracting program.

Conclusion 3 *Some technical problems must be resolved before implementation of a continuing program of patient charge abstracting*

Development of a Method to Insure That Medical and Patient Charge Abstracts Are Prepared for the Identical Discharge

The following four alternative methods are available to ensure that the same sample of patients is selected for medical record and patient charge abstracting. (See Appendix G for a detailed description of these four alternatives.)

Initial selection of patient sample by the accounting department from the daily admissions list, with referral of the sample listing to the medical records department.

Initial selection of patient sample by the medical records department from the daily discharge list, with referral of the sample listing to the accounting department.

Independent sample selection by the accounting department from the daily admissions list and by the medical records department from the daily discharge list.

NCHS referral of sample list for patient charge abstracting to the hospital accounting department after NCHS receipt of hospital medical record abstracts.

Unless NCHS selects the last alternative, the choice of sample selection method should be left to the individual hospital. Permitting a choice from among the other three alternatives should assist in obtaining hospital cooperation.

The selection of the sample by the accounting department and referral of the sample listing to the medical records department is the most economical because only one hospital department has to select the sample and prepare the sample list. In addition, ledgers for later abstracting could be identified at the time of their preparation and the time-consuming and therefore costly process of locating completed patient ledgers would be essentially eliminated.

Development of a Method for Matching Medical and Patient Charge Abstracts

A decision must be made on the basis of the following choices as to where abstracts of medical record and patient charge data are to be matched. Abstracts can be matched at the hospital by the medical records or accounting departments, or at NCHS, with the two sets of abstracts being submitted independently by the medical records and accounting departments.

It would appear to be better for NCHS to match the medical record and patient charge

abstracts because hospital time and cost will be reduced, NCHS can match at a lower cost by computer use, and NCHS will need a matching program for control anyway. NCHS matching will also minimize the need for additional contact between the accounting and medical records departments, which normally have limited association. In addition, completed abstracts for medical record data will arrive earlier at NCHS because they can be sent as soon as they are prepared without waiting for the delayed patient charge abstract. The possibility of abstracts being lost within the hospital while waiting to be matched will also be eliminated.

Development of Methods for Abstracting Patient Charges on a Continuing Basis From Automated Data Sources

It was decided not to abstract patient charge data for automated sources in the pilot study because special computer programming to retrieve patient charge data from automated sources would be costly for a one-time survey, and because time requirements to complete such programming would have substantially delayed the study.

Since automated data system hospitals were deemphasized in the survey, the following questions still need to be answered:

Is data on patient charges retrievable from automated sources?

Can patient charge abstracting be automated?

Will hospital staff and computer time be available to develop programs to retrieve data? Will machine time be obtainable on a periodic basis for abstracting?

Can valid patient charge data be collected from automated sources at a reasonable cost?

Will different interview schedules, instruction manuals, and abstract forms be required?

Until these questions are answered, NCHS cannot begin abstracting patient charges on a continuing basis in hospitals with automated patient charge systems. Very few hospitals now have fully automated patient charge systems, and even in these hospitals it will often be possible to abstract patient charge information using the same procedures as in nonautomated hospitals since printed ledgers are available. However, as the number of hospitals with automated patient charge systems increases, programs to abstract mechanically will be needed because many hospitals will otherwise be unable or unwilling to provide the data.

APPENDIX A

GLOSSARY OF TERMS

Accounting Equipment

Bookkeeping machine.—Equipment used by most hospitals for preparing patient charge ledgers and posting patient charge and source-of-payment information to the ledgers. The machine consists of a typewriter keyboard and a calculator.

Computer.—Equipment used in some of the larger hospitals for preparing patient charge ledgers and posting patient charge and source-of-payment information to the ledgers. The ledger in these hospitals is often on magnetic tape and a program is required to abstract the patient charge and source-of-payment data.

Tabulator.—Equipment used in a few hospitals for preparing patient charge ledgers and posting patient charge and source-of-payment information to the ledgers. Its capabilities are midway between those of the bookkeeping machine and the computer. The tabulator can compute automatically but cannot store information on magnetic tape.

Accounting Terms

Debit.—Accounting term for an entry on the side of an account (ledger) showing indebtedness. All charges to the patient are posted to the debit column of the ledger.

Credit.—Accounting term for an entry to an account (ledger) of the reduction of a debit. All payments to the hospital for charges incurred by a patient are posted to the credit column of the ledger.

Balance due.—Amount of money owed to the hospital. When balance due is zero, the ledger is completed, or paid.

Charges

Other charges.—All charges to the patient, except room and board and personal, which are posted to the patient charge ledger.

Personal charges.—All nonmedical charges to the patient for items such as telephone, television, guest meals, etc., which are posted to the patient charge ledger.

Room and board charges.—Hospital charges to the patient, usually for room, food, and nursing plus any other miscellaneous item for which the hospital does not make a separate charge.

Total charges.—Total of room and board, personal, and other charges which are posted to the patient charge ledger.

Charges Covered

For a ledger to be completed (paid), a payment covering each charge on the ledger must be received by the hospital. Usually, the amount of the payment equals the amount of the charge, but in several cases

this may not be true. For example, Blue Cross has contracts with hospitals in many States to pay less than the full charge. Commercial insurance companies, when paying for a Workmen's Compensation case, may pay less than the full charge and welfare often pays the hospital less than the full charge. In all these cases, the payment covers less than the full charge, so that the hospital must write off the difference between the charge and the payment received.

The pilot study investigated the amount each source of payment is responsible for, not how much it actually pays. Therefore, the abstract form collected data on total amount covered. To avoid errors in abstracting the source-of-payment information in hospitals that post the amount of the payment, provisions were made on the abstract form for writeoffs. This alerts the abstracter to a possible reason for total charges not equaling total amount covered. It is not necessary to record the amount of the writeoff if the hospital would prefer just to add this amount to the amount covered and record this as a single figure.

Charge Systems

All-inclusive rate.—Patient charge system used by some hospitals whereby the patient is charged a flat daily rate no matter what supplies or services are provided by the hospital. All patients, no matter what the severity of their illness, are charged the same rate in these hospitals.

Itemized-charge, according to supply or service provided.—Patient charge system whereby the patient is charged for each supply or service provided. Each charge is separately itemized on the patient charge ledger.

Files

Active file.—File of patient charge ledgers for which all charges are posted but are still unpaid. Sometimes referred to as *Accounts Receivable, Awaiting Payment,* or *Billing Files.*

Agency file.—File of patient ledgers determined uncollectable by the hospital and turned over to a collection agency for recovery. Sometimes referred to as the *Bad Debt File.*

Completed file.—File of patient charge ledgers for the current fiscal year for which all charges have been posted and all payments received, leaving a balance of zero. Sometimes referred to as the *Closed File.*

Inactive file.—File of completed patient ledgers (all charges posted and all payments made) more than one year old. (Seven years is the usual legal requirement for file retention.) Sometimes referred to as the *Dead File.*

Open file.—File of patient charge ledgers for which all charges have not been posted. Sometimes referred to as the *In-House* or *Posting File.*

Hospital Departments

Accounting department.—Hospital department responsible for preparing, updating, and maintaining patient charge ledgers which are the source documents for patient charge and source-of-payment abstracting.

Medical records department.—Hospital department responsible for preparing, updating, and maintaining the hospital's medical records which are the source documents for patient medical data abstracting.

Hospital Forms

Bill.—Document sent by the hospital to the patient or other responsible party describing the charges and requesting payment for the amount shown on the bill. Also called an *Invoice.*

Patient charge ledger.—Accounting department record of all supplies and services provided, charges made, and payments received for all patients admitted to the hospital.

Patient Charge

A hospital charge to the patient for supplies or services provided.

Patient Charge Abstracting

Process by which patient charge and source-of-payment information on the patient charge ledger is recorded on a patient charge abstract.

Payments

Discounts.—Full or partial credit for a patient given by hospitals, usually to employees, physicians, etc. A discount is posted like a payment since full charges are posted to the ledger for patients receiving discounts. Sometimes called an *Allowance.*

Personal.—Payments made to the hospital by the patient.

Third party.—Payments made by party other than the patient for supplies and services received in the hospital.

Posting

Process of recording patient charge and payment information to the patient's ledger. Information usually includes a description of the charge or party making the payment plus the amount of the charge or payment.

Separate Billing

Billing for a supply or service provided in the hospital but billed for by a physician, an agency, or auxiliary groups (e.g., anesthesiology, pathology, radiology, television).

Survey Materials and Forms

Hospital instruction manual.—Manual prepared for each individual hospital by the survey team during the initial visit to the hospital. It includes instructions for:

- Selecting sample for abstracting
- Identifying ledgers for abstracting
- Removing completed ledgers from file
- Preparing abstracts for completed ledgers
- Mailing abstracts to NCHS

Interview schedule.—Document used to record information collected by direct interview of hospital personnel pertaining to characteristics of the hospital and its patient charge system.

Patient charge abstract.—Form used for recording patient charge data for patients included in the study.

Training manual.—Document used to train pilot study staff to conduct interviews and abstract patient charge data during the field test.

Survey Staff

Personnel who were responsible for planning and conducting the pilot study of hospital patient charge statistics.

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APPENDIX B

CONTACT LETTERS USED WITH HOSPITALS

INTRODUCTORY LETTER FROM NATIONAL CENTER FOR HEALTH STATISTICS TO HOSPITAL

Dear Administrator:

The National Center for Health Statistics of the U.S. Public Health Service is planning to undertake a national survey to collect hospital charge statistics for patients treated in short-stay hospitals. This project is a phase of the Hospital Discharge Survey, which is currently collecting national hospital patient statistics. The objectives and design of the Hospital Discharge Survey are described in the enclosed report.

The purpose of this letter is to request your cooperation in a pilot study on patient charges involving a small number of hospitals. Your hospital was recommended by_____ of the areawide Planning Council as one whose information would make an important contribution toward developing sound conclusions in this project. Within the next several days, a representative of Booz, Allen, & Hamilton Inc., acting as an agent of the National Center for Health Statistics, will telephone you to arrange for an appointment to discuss the details of the project more fully.

The National Health Survey program, of which the Hospital Discharge Survey is a part, has been approved by the House of Delegates of the American Medical Association, and the Hospital Discharge Survey itself has been endorsed by the Board of Trustees of the American Hospital Association.

All information collected in this pilot study will be accorded strict confidential treatment as provided by Federal regulations and will be used for statistical purposes only.

Without the cooperation of your hospital and others like yours, this important research project cannot succeed. I therefore urge you to participate in this project.

Sincerely yours,

Monroe G. Sirken, Ph.D.
Chief, Division of Health Records Statistics

LETTER FROM STUDY STAFF TO HOSPITAL TO EXPRESS APPRECIATION FOR HOSPITAL COOPERATION IN PRETEST

Dear Administrator:

We would like to express our sincere thanks for your help in the pretest phase of our study for the Public Health Service. The information we received at _____ is now being used to modify our questionnaire and abstract forms for the next phase of the study.

Although we cannot promise that there will be a direct way in which we can repay you for your help, you can be assured that if we do come upon any ideas that we think would be beneficial to your hospital, we will certainly pass them along to you.

Very truly yours,

BOOZ, ALLEN & HAMILTON, Inc.

LETTER FROM STUDY STAFF TO EXPRESS APPRECIATION FOR COOPERATION OF FIELD TEST AND FINAL TEST HOSPITALS

Dear Mr. _____

We deeply appreciate the time which you have extended to us and the U.S. Public Health Service in the important study we are conducting for the National Center for Health Statistics to develop a methodology for abstracting patient charges as a means of securing important national data for health program planning.

The information we obtained in your hospital and the excellent results achieved by your people in our field survey were most useful and encouraging to us.

Thank you again for your cooperation.

Sincerely yours,

BOOZ, ALLEN & HAMILTON, Inc.

———O O O———

APPENDIX C

INTERVIEW SCHEDULE USED WITH SELECTED HOSPITAL PERSONNEL

Form Approved
Budget Bureau No. 68-R620.R2

INTERVIEW SCHEDULE FOR FINAL TEST HOSPITALS

CONFIDENTIAL. All information which would permit identification of an individual or of an establishment will be held confidential, will be used only by persons engaged in and for the purposes of the survey and will not be disclosed or released to other persons or used for any other purpose (22FR 1687)

____ ____ 001
Revised 10/27/66

Hospital Charge Pilot Study
Booz, Allen & Hamilton on behalf of
National Center for Health Statistics
U. S. Public Health Service
Department of Health, Education, and Welfare

Name and Address (verify and correct, if necessary)

Section A - Summary of Telephone Appointment and First Personal Visit

Initial Mail Contact

	Date Sent	Received	
a. National Center for Health Statistics Letter		yes	no
b. Booz, Allen & Hamilton Letter		yes	no

Telephone Contact

a. Date of telephone contact_____

b. Appointments made for personal visit
Date_____ Time _____ a.m. p.m.
Name_____ Title_____
Room and Building_____

c. Comment and important items discussed with administrator on the telephone

_____

_____

d. Other telephone contacts
Name_____ Title_____
Name_____ Title_____

Section B

Summary of Personal Interview with Administration

a. Hospital Cooperation ____Unqualified cooperation ____Qualified cooperation (describe)
____Refused to cooperate (describe)

_____

_____

Coordinator's Name:_____

If additional space is needed for comments, use last page of questionnaire

Interviewer

Name:_____ Date form completed:_____

INTERVIEW SCHEDULE WITH ADMINISTRATOR

The U.S. Public Health Service is interested in collecting information from patient ledgers on charges and sources of payment, and in relating this data to the medical information now being collected by the medical records department for the Hospital Discharge Survey.

The medical records department in your hospital is currently supplying the Public Health Service with data from the medical records for about 30 discharges per month. The additional information that the Public Health Service is interested in collecting is:

1. Total Charges
2. Room and Board Charges
3. Other Charges
4. Sources of Payment
5. Dollar Amount of Responsibility by Source of Payment

This information would be obtained from the patient's ledger and would have to be for the same patient and hospitalization episode now being used by the medical records department for medical data abstracting.

Booz, Allen & Hamilton Inc. has been conducting this study for the U.S. Public Health Service. The study is now in its final phase. To date, hospitals in Illinois, Michigan, California, Louisiana, and New Jersey have been studied. As a result of these studies, it has been determined that it is possible to collect this information from patient ledgers. Procedures and forms have been developed which need to be tested in this final study phase.

The study will require a maximum of two days and probably less in each hospital. Each hospital will be visited during the week of November 7, 1966, to develop the procedures and again on the week of December 15, 1966, to see how the procedures were followed and to discuss any problems that may have occurred. It is to be emphasized that this study will not continue beyond the above mentioned dates and that all information obtained will be kept strictly confidential.

Before talking to your business manager, I would like to ask you some questions about the survey and how a survey of this nature would be received by your hospital IF it were to be conducted on a continuing basis for a small sampling of discharges per month.

As we mentioned earlier and as you can see from the abstract form, we are interested in obtaining information from patient ledgers on Total, Room and Board, and Other charges and sources of payment including their dollar amount of responsibility.

1. Can you foresee any objections that hospital's management might have to releasing this information?

   _____Yes _____No

   If yes, explain_____

   _____

2. What would be your feelings about participating in this survey if the work were to be done on a continuing basis by your business office staff, with the Public Health Service compensating your hospital for the time spent as they are now doing with the medical records department?

   _____

   _____

Ask this question if the administrator feels that the major cause of concern would be availability of time in the business office.

3. Would you think it would be better if staff from the Public Health Service were to do the abstracting instead of your own hospital staff?

_____Yes _____No

4. From your knowledge of your hospital and others, which factors, if any, do you think would cause the greatest concern about conducting a survey of this nature?

_____

_____

INTERVIEW SCHEDULE WITH BUSINESS MANAGER

The U. S. Public Health Service is interested in collecting information from patient ledgers on charges and sources of payment and in relating this data to the medical information now being collected by the medical records department for the Hospital Discharge Survey.

Owing to many differences in hospital systems, records, and policies, it is necessary to obtain the following information before a procedure can be developed to abstract patient charge information in a hospital.

- Type of equipment used to post and record charge data
- Type and amount of information available from a patient's ledger or equivalent
- Filing and coding practices used by your hospital for patient ledgers
- Time required to complete records and receive payments from discharged patients
- Make-up of Total and Room and Board charges

The purpose of my visit today is to obtain this information about your hospital and, with your help, to develop and test a patient charge abstracting procedure, and to teach one of your employees to use the developed procedure.

I have a sample of the Hospital Discharge Survey listing and a sample abstract form. If you could obtain a sample of the hospital's discharge listing and a representative paid patient ledger, I believe we will have all the documents that are needed for this discussion.

1. One of the major considerations for developing abstracting procedures is the type of equipment your hospital uses for posting charges and payments to a patient's ledger. Which of the following is used at your hospital?

	For Charges	For Payments
1. Computer	_____	_____
2. Tabulating equipment	_____	_____
3. Bookkeeping machines (NCR, etc.)	_____	_____
4. Manual	_____	_____

Does your hospital have any plans to change this equipment in the near future?

_____Yes _____No

If yes, explain._____

_____

If computer--use Computer Hospital Instruction Manual for developing the abstracting procedures.

2. As we mentioned earlier, the patient charge information needs to be collected for the same patient and hospitalization episode that the medical records department is using for patient medical data abstracting. If the medical records department were to supply your office with the list of patients they have selected, (show sample list), would your office be able to locate the ledgers for the same patients and hospitalization episodes?

_____Yes _____No

2a. If item 2 is no, what additional information would your office require?

_____

_____

2b. If item 2 is yes, skip to item 4.

This list (show list) is prepared by the medical records department using the hospital's daily discharge listing. Each month, a sample of discharges is selected (usually through a terminal digit) to be used for medical data abstracting.

3. Can the additional information required by your department (refer to question 2a.) be obtained from the daily discharge listing?

_____Yes _____No

If item 3 is yes, do you think the medical records department would supply this additional information to your office?

_____Yes _____No

If item 3 is no, does your office have access to the daily discharge listing or any other records which could be used to obtain this additional identifying information?

_____Yes _____No

4. If patient charge abstracting were to be done on a regular basis in your hospital, which of the following methods would you suggest for coordinating patient charge and medical data abstracting?

a. Medical records department will continue to prepare listing but will prepare one extra copy for the business office, which will add additional data as required.

b. Business office will select and identify patient ledgers on its own, using the same procedures now being used by the medical records department for selecting the sample.

c. Medical records department will prepare one extra copy and will add any additional information to the business office copy, as required.

d. Other? Explain._____

_____

The U. S. Public Health Service is also interested in the type of charge system used at each hospital since it will have a direct effect on the procedures used for abstracting.

5. Does your hospital charge any of its patients on an all-inclusive per diem (daily) rate or do you charge all your patients according to each service or supply received?

_____All-inclusive

_____According to service or supply

If all-inclusive, is it possible to break down this rate to determine the amount charged for Room and Board?

_____Yes _____No

If no, what figure is supplied to insurance companies that request such a breakdown?

$_____per day

6. Now let us consider the information we are trying to obtain. As you can see from the abstract form, we are interested in obtaining Total Charges. Since the makeup of Total Charges varies among hospitals, it is necessary to determine what is included in Total Charges in your hospital. For the purposes of this study, Total Charges are defined as: All charges to the patient that are posted to the patient's ledger. I will read off a list of services or supplies that may or may not be included in your hospital's Total Charge figure. For each service or supply, could you tell me if the charge for each is:

	Included in Your "Total" Hospital Charge	Billed Separately and not Included in "Total" Charge	Not Rendered at This Hospital	Not Charged For
Professional Fees for				
1. Pathology	_____	_____	_____	_____
2. Radiology	_____	_____	_____	_____
3. Anesthesiology	_____	_____	_____	_____
4. Surgery	_____	_____	_____	_____
5. Regular physician(s) visits	_____	_____	_____	_____
Professional Fees for				
6. Physical therapy	_____	_____	_____	_____
7. Other professional fees (explain)				
8. Private duty nursing	_____	_____	_____	_____
Services				
9. Television	_____	_____	_____	_____
10. Telephone	_____	_____	_____	_____
11. Local telephone calls	_____	_____	_____	_____
12. Guest meals	_____	_____	_____	_____
Supplies				
13. Blood	_____	_____	_____	_____
14. Other	_____	_____	_____	_____

7. Can you think of any other supplies or services which may be billed separately at your hospital? (Billed separately means that the charge is not posted to the patient's ledger.)

_____Yes _____No

If yes, list:

_____

_____

8. Again, looking at the abstract form, you can see we are also interested in Room and Board Charges. We would like to see what is included under Room and Board at your hospital. Could you tell me if your hospital includes the following supplies and services under Room and Board or charges separately for them?

	Included	Separate	Not Considered in Either
Food			
Routine diets			
Special diets			
Drugs			
Routine drugs (aspirin, etc.)			
Special drugs			
Nursing			
Routine nursing			
Private duty nursing			
Building and Building Equipment			
Maintenance of facility			
Depreciation			
Heat and light			
Air-conditioning			
Laundry Services			
Overhead			
Administration			
Supervision			
Special Equipment and Services			
Intensive care			
Intravenous feeding			
Recovery room			
Surgical dressings			
Oxygen setups			
Blood setups			
Telephone			
Television			
Guest meals			
Laboratory Services			
Urinalysis			
Routine blood counts			
Biopsies			
Basal metabolism			

9. Are there any other supplies or services not mentioned on the preceding page that your hospital includes in Room and Board?

_____Yes _____No

If yes, explain._____

_____

The next item to consider is the requirements for completing a patient charge and source of payment abstract. Based on our experience to date, it has been determined that patient charge and source of payment abstracting can only be done accurately from a paid or confirmed patient ledger. Assuming this to be true, and this survey were to be conducted on a continuing basis, we would be interested in determining whether a system could be worked out in your office so that the selected patient ledgers would only have to be searched for and located once.

10. Considering this as an ongoing survey, do you think the procedure to be described in the following paragraph, or one similar to it, could and should be used to conduct this survey at your hospital ?

. Obtain (or develop) a list of patients records to be abstracted.

. Locate the selected patient ledgers in the file.

. If the ledger is paid or confirmed, remove from file.

. If ledger is unpaid or unconfirmed, identify it for abstracting with a TAB or STAMP, etc. This would alert the posting clerk to give this ledger to the abstractor once it is paid or confirmed.

Abstract from all paid or confirmed ledgers removed from file or forwarded by the posting clerk.

Could this procedure be followed?

_____Yes _____No

Should this procedure be followed?

_____Yes _____No

If no, can you recommend any other procedure that could be used to eliminate the need for locating an unpaid account several times?

_____Yes _____No

If yes, explain._____

_____

11. Paid ledgers are usually necessary to obtain accurate source of payment information. We are interested in identifying the following sources of payment and the amount for which each source is responsible. Could you tell us, for each of the following sources of payment, if:

(1) Source and amount can be identified from the paid ledger
(2) Source and amount cannot be identified from the paid ledger

	Yes Can Be Identified	No Cannot Be Identified	Explain (Yes--Where and How) (No--Why)
1. Blue Cross and Blue Shield	_____	_____	_____
2. Patient Responsibility			
Medical charges	_____	_____	_____
Personal charges (TV, phone, etc.)	_____	_____	_____

	Yes Can Be Identified	No Cannot Be Identified	Explain (Yes--Where and How) (No--Why)
3. Commercial Insurance			
4. Social Security Administration (Title XVII Medicare)			
5. Welfare (includes Title XIX Medicare)			
6. Workmen's Compensation			
7. Federal Public Service Programs (V.A. etc.)			
8. Other Service Plans (Kaiser, CHA, etc.)			
9. Probate Courts			
10. Hospital Discounts and Allowances			
11. Private Charity			
12. Union Welfare Fund			
13. Other (explain)			

12. Since we are interested in abstracting from paid or confirmed ledgers, we would like to get an idea of how long your hospital requires to collect its bills so we can determine when abstracting can be done.

    For all your patients with third-party coverage discharged today, how many days would your hospital require to receive payment or confirmation from the third party on 90% of them?

    _____Days

13. As you know, many patients who pay their own hospital bills are reimbursed by their commercial insurance. Have you any way of distinguishing those who are reimbursed from those who are not?

    ☐ Yes ☐ No

    If yes, how and how accurately?_____

    _____

    _____

14. Would it be possible to make copies of a completed ledger, and also copies of other hospital records, if any, which contain source of payment information that is not on the ledger? The name of the patient can be blanked out.

    ☐ Yes ☐ No

This concludes the interview portion of the study.

To complete our study, we would like to develop the abstracting procedure to be used at your hospital. To save time, an outline has already been developed. From this outline, the procedure can be prepared by crossing out any statements that do not relate to your hospital's system or records. The statements that remain or are filled in should be the abstracting procedure.

We would then like to explain the abstracting procedure to the person selected by you to do the abstracting. A few abstracts would be completed to show him (her) what has to be done.

We would then leave this list (show list) with you. Within the next couple of weeks (before the week of December 15th), we would appreciate it if you would complete the abstracting for the patients on the list. During the week of December 15th, we will return to your hospital and check on the work and the problems encountered. To save time, it would be very helpful if the ledgers used for abstracting (or copies thereof) could be kept aside with the completed abstracts for our review so that they would not have to be located again when we return.

I believe we are now ready to develop the abstracting procedure from the prepared outline.

INTERVIEWER'S COMMENTS AND ANALYSIS

1. Availability of source documents and information

   a. Daily discharge listing _____Yes _____No

   b. Patient ledgers _____Yes _____No

   c. Sources of payment _____Yes _____No

   If no, why was information NOT available?_____

   _____

2. Problems encountered and other comments_____

   _____

INTERVIEWER'S CHECK LIST

_____ All questions on questionnaire completed

_____ Abstracting procedure developed

_____ Samples of patient ledgers received

_____ Selection list completed with necessary identifying information

_____ Hospital employee instructed on abstracting

_____ Time summary explained

_____ Appointment made for follow-up visit

APPENDIX D

PATIENT CHARGE ABSTRACT FORM USED IN FINAL TEST HOSPITALS

Form Approved
Budget Bureau No. 68-R620.R2

CONFIDENTIAL. All information which would permit identification of an individual or of an establishment will be held confidential, will be used only by persons engaged in and for the purposes of the survey, and will not be disclosed or released to other persons or used for any other purpose (22 FR 1687).

PATIENT CHARGE ABSTRACT

I. TO BE COMPLETED BY ACCOUNTING DEPARTMENT FROM MEDICAL RECORDS LISTING.

Patient's Admission Number _____
Medical Record Number _____
Discharge Date _____
Admission Date _____
HDS Number _____

II. TO BE COMPLETED BY ACCOUNTING DEPARTMENT

Total Charges _____
Room and Board Charges _____
Other Charges (less Personal Charges) _____
Personal Charges _____

Total Amount Covered _____

Sources of Payment	Amount Covered
☐ Blue Cross and Blue Shield	_____
Blue Cross and Blue Shield write-off	_____
☐ Patient Responsibility (Medical Charges)	_____
☐ Patient Responsibility (Personal Charges, e.g., TV, Telephone, etc.)	_____
☐ Commercial Insurance	_____
☐ Social Security Administration (Title XVIII Medicare)	_____
☐ Welfare (includes Title XIX Medicare)	
Welfare write-off	_____
☐ Workmen's Compensation	_____
☐ Federal Public Service Program (Veteran's Administration, etc.)	_____
☐ Other Service Plans (Kaiser, CHA, etc.)	_____
☐ Hospital Discounts	_____
☐ Private Charity	_____
☐ Other (explain)	_____

_____ Total Sources of Payment (number of Boxes Checked)

(Work space for abstractor's calculation and comments)

Abstracting Date_____ Abstractor's Initials_____

APPENDIX E

HOSPITAL INSTRUCTION MANUAL USED IN FIELD TEST HOSPITALS

Form Approved
Budget Bureau No. 68-R620.R2

HOSPITAL INSTRUCTION MANUAL[1]

for

Abstracting Patient Charges and Source-of-Payment Data

for the

U.S. Public Health Service

at

_____

(Name of Hospital)

Manual Completed on _____

[1]The Manual presents alternative methods for handling each step in patient charge abstracting. All inappropriate alternatives for the individual hospital are to be crossed out on the Manual by the study staff member explaining the Manual to the hospital. The remaining method(s) for each step in abstracting is the one the hospital is to use for each step in abstracting.

PATIENT (ACCOUNT) IDENTIFICATION PROCEDURE

Patient charge and source of payment information will be abstracted for the same patient and hospitalization episode that the medical records department uses for abstracting patient medical data for the National Center for Health Statistics of the U.S. Public Health Service.

1. Obtain the list of accounts that have been selected for abstracting.
2. Remove ledgers (identified from medical records list) from the file and complete the following items in Section I of the abstract for each ledger.
   - HDS number
   - Patient number
   - Discharge date
   - Other
3. Abstract from a paid or confirmed ledger only.[2]

ABSTRACTING PROCEDURE FOR OBTAINING "TOTAL" CHARGES

The first item to obtain is total charges (see instruction sheet for location of total charges on abstract).

4a. Total charges on a patient's ledger are for *one* hospitalization only—proceed to number 4.

4b. Total charges on a patient's ledger may include a balance from a previous admission. If so, subtract any previous balances before completing item 4. Proceed to number 4.

4c. (Add any other procedure of choice for the hospital.)

5a. Enter total charges on abstract from the total shown on the ledger. (See 3b if not crossed off.)

5b. Compute total charges by scanning ledger for all payments (credits) and adding the total of these payments (credits) to the balance due, *if any,* (see 3b if not crossed off) and enter on the abstract.

5c. Compute total charges by adding all subtotals for supplies and services. (See 3b, if not crossed off.) Then enter on the abstract.

5d. (Add any other procedure of choice for the hospital.)

---

[2]For the field test, return all abstracts for unpaid and unconfirmed accounts with a statement "account not paid" instead of completing Section II. Be sure to complete Section I of *all* abstracts.

PROCEDURE FOR OBTAINING "ROOM AND BOARD" CHARGES

The second item to obtain is room and board charges.

This hospital has an "all-inclusive-rate" system.

6a. Use $____ per day as room and board rate. Then:
Multiply figure in item 5a by the number of days the patient stayed in the hospital. Then:
Enter result of item 5b under room and board charges on the abstract.

This hospital charges according to each supply or service provided the patient.

6b. Enter total for room and board (as shown on ledger) on the abstract.

6c. Compute room and board by totaling all room and board postings in the room and board column of the ledger and enter total on abstract.

6d. Compute room and board by scanning entire ledger for all room and board postings (not in separate column) and total all these postings. Enter this total on abstract.

6e. (Add any other procedure of choice for the hospital.)

PROCEDURE FOR OBTAINING "PERSONAL" CHARGES

The third item to obtain is personal charges.

Enter personal charges on abstract, as follows:

7a. Total all charges for telephone, television, and guest meals and enter total on abstract.

7b. Total all charges for codes_____, _____, and ____ and enter on abstract.

7c. (Add any other procedure of choice for the hospital.)

PROCEDURE FOR OBTAINING "OTHER" CHARGES[3]

The last charge item to obtain is other charges.

Calculate other charges as follows:

8a. Total room and board and personal charges and subtract this sum from total charges. Enter result on abstract for other charges.

8b. (Add any other procedure of choice for the hospital.)

---

[3]If necessary, use work space at bottom of abstract to make this calculation.

PROCEDURE FOR ABSTRACTING SOURCE OF PAYMENT INFORMATION

9. Start by identifying the source of payment. Shown below is a list of the sources of payment and how they can be identified from the patient's ledger. (See Definitions of Sources of Payment for what is included in each source of payment.[4])

Source of Payment	*Identified on ledger by*	*Cannot identify from ledger*
1. Blue Cross and Blue Shield	_____	_____
Blue Cross and Blue Shield writeoff	_____	_____
2. Patient responsibility		
- Medical charges	_____	_____
- Personal charges (TV, phone, etc.)	_____	_____
3. Commercial insurance	_____	_____
4. Social Security Administration (Title XVIII Medicare)	_____	_____
5. Welfare (includes Title XIX Medicare)	_____	_____
Welfare writeoff	_____	_____
6. Workmen's Compensation[5]	_____	_____
7. Federal Public Service Program (Veterans Administration, etc.)	_____	_____
8. Other service plans (Kaiser, CHA, etc.)	_____	_____
9. Hospital discounts and allowances	_____	_____
10. Private charity	_____	_____
11. Other (explain)	_____	_____

10. Check box (if one exists) on the abstract for each source of payment identified from the ledger.

11. Enter the amount paid by each source on the corresponding line to the right on the abstract (column labeled amount covered on abstract).

---

[4]The member of the study team who is working with hospital personnel is to complete column as to how each source of payment can be identified from ledgers in the specific hospital.

[5]Workmen's Compensation cases (#6) usually cannot be identified from the payment information on the ledger. For this reason, each ledger heading should be scanned before abstracting to determine if a Workmen's Compensation case is being abstracted.

12. Total all amounts in amount covered column and enter this total on the total amount covered line on the abstract.

13. Compare total amount covered to total charges. If these totals are *not* equal, determine error and correct.

14. Total all boxes checked and place total on total sources of payment line on abstract.

PROCEDURE FOR COMPLETING ABSTRACT

15. Enter abstracting date and abstracter's initials at bottom of abstract. Place assigned hospital number on top right-hand corner of the abstract.

16. Place completed abstracts, with ledgers or copies of ledgers in folder. Section I completed for unpaid and/or unconfirmed ledgers and Sections I and II completed for paid and/or confirmed ledgers. Hold this folder until the abstracts are picked up and the work discussed.

DEFINITIONS OF SOURCES OF PAYMENT

1. Blue Cross and Blue Shield

All charges paid for by any Blue Cross and/or Blue Shield plan *except for Title XVIII Medicare* payments made by a Blue Cross and/or Blue Shield organization acting as fiscal agent for the Social Security Administration, or for Workmen's Compensation Federal Government Program, or welfare cases when Blue Cross and/or Blue Shield provides the insurance coverage or acts as fiscal agent. It makes no difference whether Blue Cross or Blue Shield insurance premium is paid directly by the patient, by the patient and his employer, or entirely by the employer, by a union health and welfare plan, or otherwise. Blue Cross and Blue Shield plans vary in their formal name from region to region but any Blue Cross and/or Blue Shield plan which is a member of the Blue Cross Commission or Associations of Blue Shield Plans should be included. It is to be emphasized that in any case where Blue Cross and/or Blue Shield is acting as the fiscal representative for the Social Security Administration for Title XVIII, the charges are to be put under Source of Payment—Social Security Administration (Title XVIII Medicare).

1a. Blue Cross and Blue Shield writeoff.—All charges written off the Blue Cross and Blue Shield payment responsibility by the hospital based on the terms of the Blue Cross/Blue Shield contract in that region. Such discounts are not required by all plans.

2. Commercial insurance

Any charges paid by commercial insurance companies (Continental Casualty, Aetna, Connecticut General, Liberty Mutual, etc.) should be included in this category, except for Workmen's Compensation cases which are to be put under Source of Payment—Workmen's Compensation. All commercial insurance payments are included here whether the premiums are paid for by the individual, by the individual and his employer, or by the employer alone, by a union health and welfare plan, or otherwise.

3. Social Security Administration

Included in this category are all charges paid ultimately for Social Security (Medicare) beneficiaries by the Social Security Administration, including those payments made by Blue Cross and/or Blue Shield and commercial insurance companies acting as the fiscal agent for the Social Security Administration.

4. Welfare

Included are charges paid for by welfare and/or health departments as part of public welfare programs for the aged, aid to families with dependent children, aid to the blind, aid to the permanently and totally disabled, medical assistance to the aged, independent State and local welfare programs and Title XIX Medicaid programs which have replaced any of the foregoing public assistance categories. This category includes any charges paid by Blue Cross and/or Blue Shield in those cases where welfare and/or health departments pay the Blue Cross and/or Blue Shield premiums, provide the funds to public assistance beneficiaries to pay such premiums, or where Blue Cross and/or Blue Shield act as the fiscal agent for the welfare and/or health department.

This category includes the Title XIX Medicaid programs which exist in some States.

4a. Welfare writeoff.—All charges written off by the hospital due to the limits set by welfare within the region.

5. Patient responsibilities

5a. Patient responsibilities—medical.—This includes charges paid directly by the patient or his representative for supplies and services received.

5b. Patient responsibility—personal.—All charges paid by the patient for telephone, television, and guest meals.

6. Hospital discounts

Includes charges for which the hospital directly assumes responsibility and requires no payment from the patient or his representatives. It includes discounts provided hospital employees, members of the medical profession, members of churches or religious organizations working for the hospital, etc.

7. Federal Public Service programs

Any program under which the Federal Government pays for medical services for a Government employee beneficiary such as the Veterans Administration, military dependents' medical care services, etc.

8. Private charity

Any payments for medical services donated or given from any source when no direct responsibility for payment exists, such as individuals paying bills for others, and voluntary health agencies, foundations, and church groups, who pay for medical services with no legal responsibility involved. This does not include discounts given by hospitals to their employees, which should be placed under source of payment—hospital discounts.

9. Workmen's Compensation

These are payments made by any local, State, and Federal Workmen's Compensation program for injuries or illness related to the patient's occupation. It does include Workmen's Compensation medical payments made by commercial insurance, Blue Cross, or other third parties acting as the insuring agent for Workmen's Compensation coverage.

10. Other service programs

Payments made by any third-party payment group other than Blue Cross, commercial insurance, welfare, or Government.

This category includes primarily prepayment insurance plans such as Kaiser Foundation Health Plans, Community Health Associates, and Group Health Association.

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APPENDIX F

SUGGESTED PATIENT CHARGE ABSTRACT FORM FOR FUTURE USE

Form Approved
Budget Bureau No. 68-R620.R2

CONFIDENTIAL. All information which would permit identification of an individual or of an establishment will be held confidential, will be used only by persons engaged in and for the purposes of the survey and will not be disclosed or released to other persons or used for any other purpose (22 FR 1687).

PATIENT CHARGE ABSTRACT

I. TO BE COMPLETED BY THE ACCOUNTING DEPARTMENT FROM LIST OF PATIENTS SELECTED FOR ABSTRACTING

Patient's Admission Number _____
Patient's Admission Date _____
Patient's Discharge Date _____
Patient's Hospital Discharge Survey Number _____
Patient's Medical Record Number (if other than Admission Number) _____

Total Charges _____
Room and Board Charges _____
Personal (Nonmedical) Charges _____
Other Charges (Total Charges less Room and Board Charges and Personal Charges) _____

Total Amount Covered _____

Sources of Payment	Amount Covered
☐ Blue Cross and Blue Shield	_____
Blue Cross and Blue Shield write-off	_____
☐ Commercial Insurance	_____
☐ Welfare (includes Title XIX Medicare)	_____
Welfare write-off	_____
☐ Social Security Administration (Title XVIII Medicare)	_____
☐ Patient Responsibility (Medical Charges)	_____
☐ Other	_____

Check Source of Payment

1. Private Charity _____
2. Hospital Discounts _____
3. Federal Public Service Programs _____
4. Other Service Programs _____
5. Workmen's Compensation _____
6. Other _____

Total Sources of Payment (Number of Boxes Checked) ___

Comments and Work Space

Abstracting Date _____ Abstractor's Initials _____

APPENDIX G

ALTERNATIVE METHODS FOR SELECTING AND RELATING PATIENT CHARGE LEDGERS AND MEDICAL RECORDS FOR ABSTRACTING IN A CONTINUING ABSTRACTING PROGRAM

ALTERNATE 1: INITIAL SELECTION OF PATIENT SAMPLE BY ACCOUNTING DEPARTMENT WITH REFERRAL TO MEDICAL RECORDS DEPARTMENT

Assumptions

1. The hospital's admission list is an appropriate instrument for sample selection.

2. The accounting department would be willing to select the patient sample for patient charge and medical data abstracting from the hospital's admission list.

Procedure

1. Accounting Department—ledger preparation clerk

   (1) Obtains instructions from National Center for Health Statistics for selecting the sample.

   (2) Stamps or tabs each ledger selected for abstracting as it is prepared.

   (3) Stamps additional pages of ledgers selected for abstracting since each new page becomes the face page.

   (4) Prepares in quadruplicate a list of patients selected for abstracting for use as follows:

   - Two copies to medical records department (one for files and one to be sent to NCHS with medical records abstracts)
   - Two copies for accounting department employee designated for abstracting (one for files and one to be sent to NCHS with patient charge abstracts)

2. Accounting Department—file clerk

   (1) Removes each ledger identified by the ledger preparation clerk by a tab or stamp before filing in the closed file.

   (2) Gives completed ledgers to the accounting department employee designated for abstracting.

3. Accounting Department—employee designated for abstracting

(1) Receives two copies of list of patients selected for abstracting from the ledger preparation clerk.

(2) Receives completed ledgers identified for abstracting from the accounting department file clerk.

(3) Completes abstract for each ledger received.

(4) Checks off name of patient in both copies of list of patients selected for abstracting as abstract is completed.

(5) Indicates on ledger that abstracting was completed and returns ledgers to file clerk for refiling.

(6) Sends monthly to NCHS completed abstracts for that month, abstracts for prior months clipped separately, list of patients selected for abstracting, and completed statement on changes in accounting system and participating personnel (transmittal sheet).

(7) Audits periodically the list of patients' ledgers selected and not checked off (abstracted) and attempts to find absent ledgers.

(8) Files the completed list of patients for sample when all abstracts are completed and uses it annually to check NCHS reimbursement.

Evaluation

1. Advantages

(1) Costs hospital less than other alternatives since ledger is identified by accounting department at time of original preparation of ledger and constant searching of files is avoided.

(2) Requires NCHS to monitor sample selection of only one hospital department.

(3) Minimizes problems of matching patient charge and medical record abstract since the HDS abstract number is assigned by only one hospital department.

(4) Eliminates need for using patient's name to find patient charge ledgers for abstracting.

2. Disadvantages

(1) Requires training accounting department ledger preparation clerk to select the sample from the hospital's admission list.

(2) Creates possibility of ledger tampering since ledger is identified before charges are posted.

(3) Necessitates use of hospital admission rather than discharge list which is usual basis for sample selection of hospital patient studies.

ALTERNATE 2: INITIAL SELECTION OF PATIENT SAMPLE BY MEDICAL RECORDS DEPARTMENT WITH REFERRAL TO ACCOUNTING DEPARTMENT

Assumptions

1. The medical records librarian will consent to send a copy of the list of patients selected for abstracting, including the names of patients, to the accounting department.

2. The accounting department will be willing to cooperate with the medical records department in permitting the medical records department to prepare the list of patients whose ledgers will be abstracted.

3. The ledgers selected for abstracting are accessible after they are paid.

Procedure

1. Medical records librarian

   (1) Selects patients for medical record and patient charge abstracting from the hospital's daily discharge listing in accordance with NCHS instructions.

   (2) Prepares in quadruplicate a list of patients selected for abstracting for use as follows:

   Two copies to accounting department file clerk with the patient's name since the name is necessary to find the ledgers in the accounting department (one for files and one to be sent to NCHS with patient charge abstracts)
   Two copies for medical records department employee designated for abstracting (one for files and one to be sent to NCHS with medical record abstracts)

2. Accounting Department—file clerk

   (1) Receives two copies of the list of patients selected for abstracting with name of each patient from the medical records department.

   (2) Places list from medical records in a follow-up file since most patient charge ledgers will not have been paid and therefore will not be ready for abstracting.

   (3) Removes list of patients selected for abstracting from follow-up file after sufficient time has elapsed to allow most of the ledgers to be paid.

   (4) Uses the list of patients selected for abstracting, after sufficient time has elapsed for the majority of ledgers to be completed:

   - Locates all selected ledgers
   - Removes completed ledgers
   - Stamps or tabs incomplete ledgers

   (5) Gives completed ledgers to the accounting department employee designated for abstracting with two copies of list of patients selected for abstracting.

   (6) Forwards all stamped or tabbed ledgers to the employee designated for abstracting as they are closed out.

3. Accounting Department—employee designated for abstracting

(1) Receives completed ledgers and both copies of list of patients selected for abstracting from accounting department file clerk.

(2) Completes abstract for each ledger received.

(3) Checks off names of patients as abstracted on both copies of list of patients selected for abstracting.

(4) Indicates on ledger that abstracting was completed and returns ledgers to file clerk for refiling.

(5) Sends monthly to NCHS completed abstracts for that month, abstracts for prior months clipped separately, list of patients selected for abstracting, and completed statement on changes in accounting system and participating personnel.

(6) Audits periodically the list of patient ledgers selected and not checked off (abstracted) and attempts to find absent ledgers.

(7) Files the completed list of patients selected for abstracting when all abstracts are completed and uses it annually to check NCHS reimbursement.

Evaluation

1. Advantages

(1) Maintains most consistency with present Hospital Discharge Survey since medical records department is already designated for selecting the patient sample for abstracting.

(2) Requires NCHS to monitor sample selection of only one hospital department.

(3) Minimizes problems of matching patient charge and medical record abstracts since the HDS number is assigned by only one hospital department.

2. Disadvantages

(1) Costs more than sample selection by accounting department since each ledger selected for abstracting by medical records department must be located and removed from files in the accounting department.

(2) Medical records department must write the patients' names on the list of patients selected for abstracting before forwarding to the accounting department.

ALTERNATE 3: INDEPENDENT SAMPLE SELECTIONS BY ACCOUNTING AND MEDICAL RECORDS DEPARTMENTS

Assumptions

1. Identical patient numbers will be used on the hospital's daily admission and discharge lists. (Required because accounting department will select sample from the admission list and medical record department from the discharge list.)

Procedure

1. Accounting Department—ledger preparation clerk

   (1) Obtains instructions from National Center for Health Statistics for selecting the sample.

   (2) Stamps or tabs each ledger selected for abstracting as it is prepared.

   (3) Stamps additional pages of ledgers selected for abstracting since each new page becomes the face page.

   (4) Prepares in duplicate a list of patients selected for abstracting for use by accounting department employee designated for abstracting, who retains one copy for files and one to be sent to NCHS with patient charge abstracts.

2. Accounting Department—file clerk

   (1) Removes each ledger identified by the ledger preparation clerk by a tab or stamp before filing in the closed file.

   (2) Gives completed ledgers to the accounting department employee designated for abstracting.

3. Accounting Department—employee designated for abstracting

   (1) Receives two copies of list of patients selected for abstracting from the ledger preparation clerk.

   (2) Receives completed ledgers identified for abstracting from the accounting department file clerk.

   (3) Completes abstract for each ledger received.

   (4) Checks off name of patient in both copies of list of patients selected for abstracting as abstract is completed.

   (5) Indicates on ledger that abstracting was completed and returns ledgers to file clerk for refiling.

(6) Sends monthly to NCHS completed abstracts for that month, abstracts for prior months clipped separately, list of patients selected for abstracting, and completed statements on changes in accounting system and participating personnel (transmittal sheet).

(7) Audits periodically list of patients' ledgers selected and not checked off (abstracted) and attempts to find absent ledgers.

(8) Files the completed list of patients for sample when all abstracts are completed and uses it annually to check NCHS reimbursement.

Evaluation

1. Advantages

(1) Costs only slightly more than sample selection by accounting department alone (only additional cost is preparation of separate listing of patients selected for abstracting by the medical records department). Low cost because ledger is identified by accounting department at time of original preparation of ledger and constant searching of files is avoided.

(2) Requires no contact between medical records and accounting department in hospitals.

(3) Eliminates need for using patient's name to find patient charge ledgers for abstracting.

2. Disadvantages

(1) Requires NCHS to monitor sample selection of two departments.

(2) Increases problems of matching patient charge and medical record abstracts because common HDS numbers will not exist.

ALTERNATE 4: REFERRAL BY NCHS TO HOSPITAL ACCOUNTING DEPARTMENT AFTER RECEIPT OF HOSPITAL MEDICAL RECORDS ABSTRACTS

Assumptions

1. NCHS will find it advantageous to designate the patients for patient charge abstracting by using the same sample listing prepared by the medical records department for medical data abstracting.

2. The accounting department will be willing to cooperate with NCHS, permitting NCHS to designate the patients for patient charge abstracting.

3. The ledgers selected for patient charge abstracting are accessible after they are paid.

Procedure

1. Medical records department

(1) Completes medical records abstracts and forwards abstracts with list of patients selected for abstracting to NCHS.

2. NCHS

(1) Receives medical records abstracts and list of patients selected for abstracting from the hospital's medical records department.

(2) Uses list of patients selected for medical record abstracting to designate patients for patient charge abstracting.

(3) Prepares list of patients designated for patient charge abstracting in triplicate for use as follows:

- Two copies to accounting department file clerk
- One copy for NCHS file

3. Accounting Department—file clerk

(1) Receives two copies of list of patients for patient charge abstracting from NCHS.

(2) Obtains patient names from medical records department in cross-reference file and writes name on list. (Some hospitals will require names of patients to locate ledgers.)

(3) Using the list of selected patients:

- Locates all patient ledgers.
- Removes completed ledgers and forwards to accounting department employee designated for abstracting.
- Stamps or tabs all selected ledgers that are not complete.

(4) Gives both copies of list to employee designated for abstracting.

(5) Forwards all stamped or tabbed ledgers to employee designated for abstracting as they are completed.

4. Accounting Department—employee designated for abstracting

(1) Receives completed ledgers and both copies of list of patients selected for abstracting.

(2) Completes abstract for each ledger received.

(3) Checks off name of patient on both copies of list of patients selected for abstracting as abstract is completed.

(4) Indicates on ledger that abstracting was completed and returns ledgers to file clerk for refiling.

(5) Sends monthly to NCHS completed abstracts for that month, abstracts for prior months clipped separately, list of patients selected for abstracting, and completed statement on changes in accounting system and participating personnel.

(6) Audits periodically the list of patients' ledgers selected and not checked off (abstracted) and attempts to find absent ledgers.

(7) Files the completed list of patients for sample when all abstracts are completed and uses it annually to check NCHS reimbursement.

Evaluation

1. Advantages

(1) Maintains most consistency with present Hospital Discharge Survey since medical records department is already designated for selecting the patient sample for abstracting.

(2) Requires NCHS to monitor sample selection of only one hospital department.

(3) Minimizes problems of matching patient charge and medical record abstracts since the HDS number is assigned by only one hospital department.

2. Disadvantages

(1) Costs more than sample selection by accounting department since each ledger selected for abstracting by medical records department must be located and removed from files in the accounting department.

(2) Medical records department must write the patients' names on the list of patients selected for abstracting before forwarding to the accounting department.

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