

systematically it is much better to give them up, for the doctor need not delude himself into supposing that a patient who three times disobeys, specific orders will stop there, and he should not risk his reputation in the hands of a strong-headed, stupid or dishonest patient. If patients are followed up in this way there is no difficulty in keeping in close touch with them and controlling their lives most thoroughly, and guiding their slow progress toward recovery will never be tedious, but on the contrary will prove absorbingly interesting not only to the patient but to the doctor.

QUALITIES NEEDED IN THE PHYSICIAN

Not every doctor is so constituted as successfully to handle tuberculous patients. To do so demands certain qualities which are not so necessary to the doctor treating acute diseases, and he who may be pre-eminently successful in treating pneumonia, typhoid, measles, etc., may fail when he undertakes the management of so long drawn out a disease as pulmonary tuberculosis.

1. *Personality*.—All writers on the subject have dwelt on the importance in the physician in this sort of work of that indefinable quality which is called "personality." From the doctor will often have to come the will, the interest, the cheerfulness and the enthusiasm which his patients need. He must be able to charge them with these qualities as an electric current charges a storage battery, and it will need a strong personality and a large supply of vitality to enable him to fill this rôle.

2. *Will*.—For one who is called on to control others it need scarcely be noted that a strong will and forcefulness are desirable so as to compel obedience if need be; but the doctor's discipline should be as little in evidence as possible, and he should be able so to convince his charge of his interest in the latter's welfare, and so make plain to him the reasons for his orders that he will be obeyed not merely, or chiefly, because the patient fears to disobey, but rather from choice and trust.

3. *Teaching Ability*.—Since apparent recovery from tuberculosis demands a thoroughly trained and instructed patient who can be relied on thereafter to live wisely and avoid harmful influences, the doctor must have teaching ability, and not merely show his patient what he must do, but fix it in his memory by giving him reasons why he must do it, for no principle of pedagogy is better established than that the teaching which gives no reasons for the facts it imparts is lifeless and will soon be forgotten.

The doctor must be able to interest the patient in what he teaches him and hence must put it in an attractive form, for however beautiful naked truth may be, it is unquestionable that the clothing in which she is presented to us can greatly enhance or detract from her charms.

Further, if what the patient learns is to stay with him the rest of his life and keep him from imprudence in the future, it must impress him deeply; and we should never forget that he who recovers without having been taught how to retain his recovered health is pretty sure to relapse.

4. *Enthusiasm and Interest*.—If, by good fortune, the doctor is an enthusiast it will serve to lighten his labor, to turn what otherwise might be work into play, and to increase the interest which he can take in his cases. To be able to feel a lively interest in his patients, not merely as cases but as human beings, is a great assistance to the physician.

A small minority of the physician's charges are so unfortunately constituted that it is almost impossible for him to interest or be interested in them. These are a constant drag on the doctor and drain him of his vitality; for such he can usually do but little. The large majority, even if not unusually interesting at first sight, will prove so if studied closely enough, while a small but blessed minority are possessed of such a personality that they interest the physician from the first moment, and by their intelligent comprehension and cooperation make his treatment of them a pleasure throughout.

The importance of detailed work on the physician's part has been sufficiently dwelt on, and I can only repeat that vague, general directions are useless and that the closest specification of our wishes is essential.

Much more could be written on this question of the bearing of the qualities of the patient and his physician on the success or failure of the home treatment of pulmonary tuberculosis, but necessary limitations restrain me, and I can only hope that what I have said may make plain the importance of the mental control of our tuberculous patients.

In closing, let me urge on the general practitioner, to whom these cases first come, not to regard them as hopeless or to treat them routinely, or to relegate them to that category which he may, indeed, have to treat, but in whom there is no outlook or interest, but always to remember that, if only they are recognized as early as modern diagnostic methods permit and handled in the way I have suggested, the large majority will prove hopeful and interesting.

Let them be looked on and studied not merely as cases but as individuals with a personality that will repay study, with qualities which it is in our power to modify for their benefit, and who should appeal deeply to the profession as in their helplessness they come to us for help.

Thus regarded and thus handled, the treatment of our patients outside of closed sanatoria will reward us with unexpected results and remove from the minds of the profession the false, but painfully prevalent idea, inherited from the days when a really early diagnosis was impossible, of the incurability of pulmonary tuberculosis.

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SYSTEM IN RECORDING CASES *

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One can find in medical literature a great many sentences and paragraphs, an occasional page and a few isolated articles dealing with the subject of case records, but there is very little which offers to the student and practitioner a plan by which he may make records in an orderly and systematic way and at the same time preserve them for ready reference. There is no difference of opinion as to the value of such records. All seem to be agreed that it is impossible to arrive at a full and correct understanding of our cases without the systematic study incident to making records of the cases as they come before us from day to day.

* Because of lack of space, this article here appears in abbreviated form. The complete article, including the full scheme of classification and details in regard to its application, may be obtained in the author's reprints, a copy of which will be sent by THE JOURNAL on receipt of a two-cent stamp.

It has long been the custom to keep records in large hospitals, and the greater part of the statistical basis for our discussions is from hospital records. It has recently been truly said by one of our American teachers, "There is no doubt that our present statistics are drawn too much from hospital work and that some valuable points might be developed were our private records as available as those concerning patients treated in the hospital."

It seems almost superfluous to enumerate the reasons for keeping case records in private practice as well as in hospital work. A comparison between private patients and hospital patients shows considerable difference in them in several important ways. Patients are not usually admitted to the hospital wards until they are seriously ill. A large proportion of such serious illness is due to the oversight or neglect of conditions which would have been easily cured if they had been observed early. For this reason the ward of the hospital presents some conditions which are rarely met in private practice and is a comparatively poor place to study initial symptoms of disease. This is better done in private practice. Disease is modified by the environment of the patient, and it is only by observing a large number of patients of similar environment that we can fully understand all the symptoms presented. To know a disease in its entirety we must have opportunity to make systematic study of it under varying conditions.

Those members of the profession who write understand fully the value of case records; but the importance of such records is not so plain to the great body of practitioners, who are inclined to say that they have no time for taking case records and no use for them if they are made. Case records are not kept solely for the purpose of teaching and writing, but should be kept for systematic and orderly study of the serious daily work of the general practitioner. There is an important work of observation and record-making remaining to be done by the physician in the country and in the small towns. Each environment develops its own modifications, which should be carefully studied and recorded. These practitioners are neglecting a duty which they owe to the sick as well as to their profession. The field of medicine has become too large and the plans of treatment too varied for any man to carry all in his head. Each one should have a plan by which he can easily review, for the purpose of comparison, all of the cases which he has had of a given kind. This is particularly true of the family practitioner, and yet he is the one who is least inclined to record his observations. The general practitioner sees such a variety of cases during the year that, in order to do his best in understanding each case, he should be able to review the similar ones which he has previously had. If railroad companies, insurance companies, lodges, associations and corporations find minute records* of their members or employes so valuable, are not such records equally valuable to the practitioner of medicine who is devoting his whole life to that business?

THE ESSENTIAL REQUIREMENTS OF A CASE-RECORD SYSTEM

There is a demand in the profession for some plan of case record which will be portable, brief, orderly and systematic. One reason why so few men keep records of their cases is that they have never been presented with a well-digested plan by which such records can be kept and made accessible for immediate reference. There

are few physicians who have not at some time in their careers tried to keep records of their cases, but after a few months or years have abandoned record-keeping. Why is this true? Usually because the plan which they adopted was impractical. Suppose a physician should keep records of cases until he has accumulated a large number. Perhaps he has made histories of 500 cases of one particular disease, extending through many years and contained, with hundreds of other cases, in books, drawers or boxes, according to the plan used. To make use of these cases, even for the preparation of a paper, he is confronted with the formidable task of going over his whole list in order to pick out those of the particular disease in which he is at that moment interested. Consequently many men who have recorded cases for years have no practical way in which to make daily use of their records. The object of this paper is to describe a method which seems to have in it the essentials of an orderly and systematic plan by which records made at the bedside or in the office are available for reference at any time without search through a large accumulation of records on other subjects than the one desired.

There are several essentials in making case records. Such records must be made by the doctor himself, and for this reason the plan adopted must be portable and convenient in order that he may always have with him the material on which the record is to be written. The record must be concise, and printed outlines may be used, although there is considerable difference of opinion as to the value of such outlines. With the average man records will be better taken and more orderly and more useful for future reference if outlines are used. Any plan to be successful must be practical and available for every-day use, at the bedside, at the office, at the hospital or on the street. In the plan presented the size of the card is not material, but I use a 3x5 card because it can be readily carried in any pocket and is not bulky. Only the number of cards necessary for one day need be carried. It is the size used in all libraries and was adopted by the American Library Association after long discussion. The only disadvantage which can be urged against this card is that it is too small for the amount of information which should be recorded and necessitates several cards and rewriting the patient's name on each. The first difficulty is obviated by multiplying the number of cards, which one will find a real convenience as it allows the various parts of the examination to be separated. This, combined with portability and convenience, overcomes the second objection. Only one size of card should be used. It is a great mistake to have one size for one purpose and another for other purposes. As one's work develops various combinations and readjustments will be found desirable and can readily be made if the cards are all of one size.

In the plan presented the business account is taken care of incidentally on the record card, but this is a matter of individual preference and the account can be kept entirely separate either in books or on other cards. This provision was adopted because it saved rewriting the patient's name and address. It has been the constant aim to reduce duplicating to the minimum and yet preserve the essentials. The plan adopted should eliminate the necessity for copying or making notes which are later to be written out in full. The original record should consist of orderly notes taken in a form ready for filing at the time of making the observation.

The one point on which many plans have failed is that of portability. In the enthusiasm of the moment the beginner will overlook or ignore this point and later find his work interrupted and finally ruined and abandoned because his card, sheet or book is not of such dimensions as to make it convenient for constant carrying in the pocket without being too bulky and cumbersome. Too much stress can not be laid on this point, which to the beginner often appears insignificant. The average man begins his record-taking when his time is

should be scrupulously avoided. Above all documents, a case record should be brief and to the point. It should be cleared of all that is superfluous in both words and matter, if it is to be continued year after year in a systematic and useful way.

There are various objects to be attained by taking records, and the form and the extent will vary greatly with the purpose of the observer. This paper is written from the standpoint of the practical working physician who needs his records for two principal purposes: first,

190			
Referred by		of	
Age	Sex	Civil Condition	
Occupation		Circumstances	
Home Surroundings		Habits	
Amt. of exercise			
Appetite			
Character of food			
Alcoholics			
Tobacco			
Tea and Coffee			
Previous residences			
Previous illnesses	When	Duration	Condition of Recovery

Fig. 1:--For Environment, habits, and previous illnesses.

Name	Age	Health	Family History		Previous Health
			Cause of Death.	Duration of Illness.	
Father					
Mother					
Brothers					
Sisters					
Constitutional Diseases which parents, grand-parents, brothers, sisters, uncles or aunts have had:--					

Fig. 2:--For Family history.

General Condition and Appearance							
Attitude				Gait			
Pose of Head							
Set of Shoulders							
Inclination of Trunk							
Dress							
Height	ft.	in.	Weight	lbs.	Waist	in.	
Chest form			Inspiration		in.	Expiration	in.
Nutrition							
Expression							
Eyes		Eye Lids		Ears			
Nose		Lips		Complexion			
Cheeks				Hands			
Skin				Throat			
Neck							
Lymphatics							

Fig. 4:--For personal characteristics.

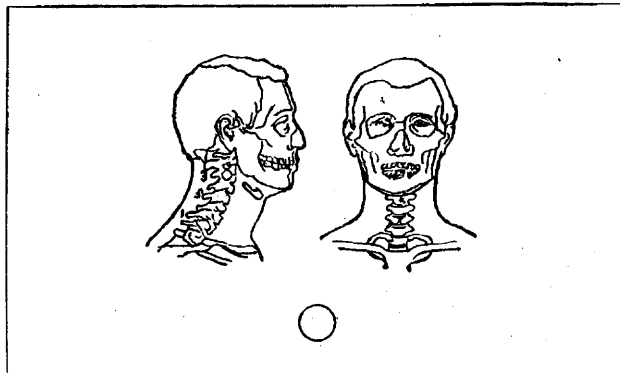


Fig. 7.

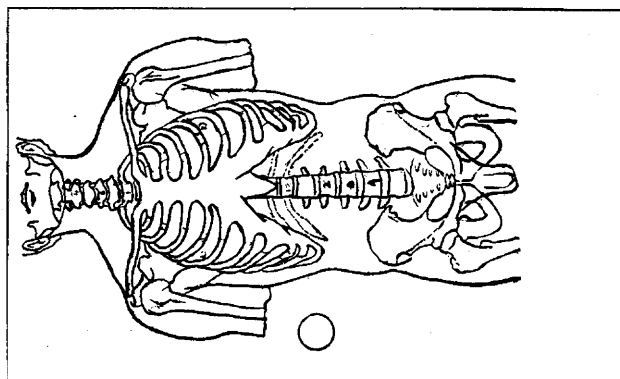


Fig. 8.

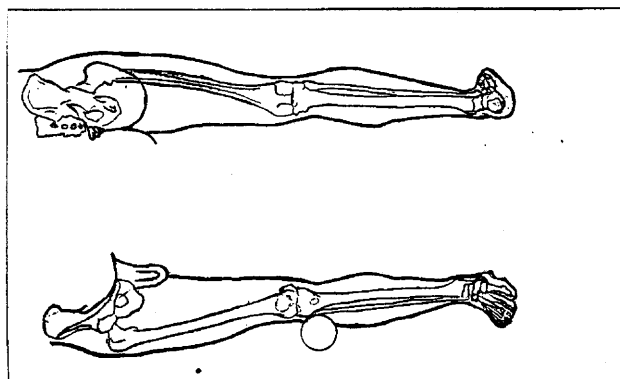


Fig. 9.

not all occupied. In a few years he finds himself more and more busy and his time has a real market value which he must economize carefully. A busy day, a busy week and a busy month will go by with no records taken because the system pursued required more time than it was possible for him to give to it. Often a more portable and convenient plan would have saved the day. Many fail because they record too minutely in the beginning and are unable to keep it up. Records should deal with essentials and all unimportant details

to improve his method and character of observation; second, to preserve these observations for ready reference.

Many succeed as to the first, but the great majority fail with the second. It is believed that the plan herein presented provides a convenient and concise method with full provision for elasticity and completeness. It comprises two distinct parts, an alphabetical file under the name of the patient, and a classified list of cases under the diagnosis or probable diagnosis.

77604 ^v	Cool, James A.	
1902		
Aug. 27.	To Examination of Urine	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Diagnosis		
Quantity in 24 hours	"	Albumen <i>Small amount.</i>
Reaction <i>acid</i>	Specific gravity <i>1.026</i>	Sugar <i>None.</i>
Color <i>amber.</i>		Bile <i>None.</i>
Deposit "		Case <i>None.</i>
Chlorides "		Blood <i>None.</i>
Sulphates "		Pus <i>Small amount.</i>
Phosphates "		Mucus <i>Yes.</i>
Indican "		Crystals <i>None.</i>
Urea "		Epithelium <input checked="" type="checkbox"/>
Remarks <i>Patient gives a history of waking one or more times each night for several years, to urinate the bladder.</i>		
Examined by <i>G. E. H.</i>		

43185 ^v	Cool, James A.	
1902		
Sept. 23.	Patient left Hospital.	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Diagnosis		
Complaints	Wound healed by primary union throughout. Patient able to get about on crutches.	
Treatment	Albumen has disappeared from urine.	

○

#9104	Cool James A.	
1903		
Nov. 18.	To Visit	\$ 50
	By Cash on account	00
Diagnosis		
Complaints	Confusion of Stump from a fall.	
Treatment	Bichloride (1-3000) compresses.	

Cool James A.	
1903	
Jan. 25	By contra account (slow window) 71.50 By Cash in full 188.50
Diagnosis	
Complaints	
<p>For several weeks patient has been using a knee pad and peg instead of crutches and has gotten on surprisingly well on the end of the stump.</p> <p>A few days ago was measured for an artificial leg.</p>	
Treatment	

From day to day, in the office, at the hospital, or at the bedside, the record is written on cards such as those shown in Figures 1, 2 and 4, which are filed in chronological order under the patient's name.

operations (Figure 12). The ledger card contains the class under which the case record was filed (Figure 11. No. 616.a52) and shows just where to look for the original record. (Figure 12.)

In practical use the original record cards are filed with the ledger card (Figure 11) and remain there until the case is completed, when it is transferred to the classified cases (Figure 12).

After the account is paid the ledger cards are transferred and become an alphabetical index by patients' names to the records.

By either plan the records are classified at once and all records of each disease or injury are found together, are kept up to date, and are immediately accessible for reference, and study and enable one to compare symptoms, methods, findings, treatments and results. Such a plan is of great practical value for both the clinician and the writer of articles and books by enabling them to consult the records of any case or group of cases without the necessity of a tire-some search.

The most important thing connected with this plan was the working out of a few modifications of the Dewey decimal classification. This classification consists of two parts: first, a division of all knowledge arranged in ten classes, each class being assigned one hundred numbers; second, a relative index. An outline of the classification is as follows:

- 000 General Works.
- 100 Philosophy.
- 200 Religion.
- 300 Sociology.
- 400 Philology.
- 500 Natural Science.
- 600 Useful Arts.
- 700 Fine Arts.
- 800 Literature.
- 900 History.

Each of these classes is subdivided into ten divisions, one of which, the subdivision of 600, Useful Arts, will illustrate the system:

- 610 Medicine.
- 620 Engineering.
- 630 Agriculture.
- 640 Domestic Economy.
- 650 Communication, Commerce.
- 660 Chemical Technology.
- 670 Manufacture.
- 680 Mechanic Trades.
- 690 Building.

Medicine is in the first division of the sixth class of knowledge and is number 610 in that class. Wherever 610 to 619 inclusive appear in the classification they indicate that the subjects are medical. Medicine (610) is separated into ten subdivisions, as follows:

- 610 General Works.
- 611 Anatomy.
- 612 Physiology.
- 613 Personal Hygiene.
- 614 Public Health.
- 615 Materia Medica and Therapeutics.
- 616 Pathology, Diseases and Injuries, Treatment.
- 617 Surgery.
- 618 Diseases of Women and Children.
- 619 Comparative Medicine, Veterinary.

In working out the subsections of each of the ten subdivisions of medicine, decimals are used.

The following comprise the general headings of the subsections as given in the complete paper and illustrate the plan of the classification:¹

1. Surgery and surgical treatment are included under the region of the disease.

OUTLINE OF CLASSIFICATION OF MEDICINE

616	PATHOLOGY, DISEASES AND INJURIES, TREATMENT.
616.a	INJURIES
616.b	RESULTS OF INJURIES. SURGICAL PATHOLOGY
616.c	TISSUE CHANGES
616.d	NEW GROWTHS
616.e	FOREIGN BODIES
616.f	NERVE DISTURBANCES
616.g	SPECIAL INFECTIONS
616.h	FUNCTIONAL DISTURBANCES
616.k	ANOMALIES
616.08	TREATMENT
616.081	CLIMATIC
616.082	HYGIENIC
616.083	DIETETIC
616.084	MECHANICAL AND ELECTRICAL
616.085	DRUGS
616.086	SPECIFICS AND CURES
616.087	OPERATIVE
616.088	SERUM
616.089	PROPHYLACTIC
616.1	DISEASES OF THE CIRCULATORY SYSTEM
616.2	RESPIRATORY SYSTEM
616.3	DIGESTIVE SYSTEM
616.4	LYMPHATIC SYSTEM. DUCTLESS GLANDS.
616.5	BREASTS
616.6	DISEASES OF THE SKIN
616.7	GENITOURINARY SYSTEM
616.8	ORGANS OF LOCOMOTION
616.8	NERVOUS SYSTEM
616.89	MENTAL DISEASES
616.9	GENERAL DISEASES
617.5	THE BODY BY REGIONS
617.7	DISEASES OF THE EYE
617.8	DISEASES OF THE EAR
618.1	DISEASES OF WOMEN
618.2	OBSTETRICS
618.9	DISEASES OF CHILDREN

In order that the classification may be completely useful, and especially that those not familiar with indexing may make practical use of this plan, a complete index to the classification in dictionary form is appended in the complete paper. The following illustration is taken from this index:

INDEX TO CLASSIFICATION.

Abdomen	617.55
Abdominal hernia	617.55.b93
Abortion	618.39
Abrasions	616.a3
Abscess	616.b3
Absence of parts, transposition or displacement	616.k8
Accessory cavities of the nose	616.212
Accessory nerve, spinal portion	616.828
Actinomycosis	616.974
Acute arthritis	616.72.b21
Ague	616.937
Anemia	616.15.g1
Aneurism	616.13.c75
Angioneurosis	616.13.c78
Animal parasites (general diseases)	616.961
Animal parasites in skin diseases	616.562
Ankle joints	616.7283
Anomalies	616.k
Anthrax	616.971
Antrum of Highmore	616.213
Anus	616.351
Aorta	616.131
Aortic valve	616.121.g22
Appendages of the skin	616.55
Appendix	616.3452
Arachnoid	616.813
Arteries	616.13
Arteries inflammations of	616.13.b2
Arthritis	616.72.b2
Arthritis, acute	616.72.b21
Arthritis, chronic	616.72.b22
Arthritis, rheumatoid	616.72.b724
Arteriosclerosis	616.13.c78
Ascending colon	616.3471
Asphyxia	616.a8
Atresia, Dilatation, Stricture	616.8
Atrophies of skin	616.54
Atrophy	616.c1
Auditory canal	617.862
Basal ganglia	616.833
Base of brain (subcortical white matter)	616.832
Beriberi	616.918
Bile passages	616.362
Bladder	616.62
Exstrophy of	616.62.k2
Functional disorders	616.62.h
Sacculated	616.62.g6
Blood, diseases of	616.15
Structural diseases of	616.15.g5
Body by regions	617.5
Bones (except spine)	616.71
Face	616.713
Fragilitas ossium	616.71.g6
Inflammation	616.71.b2
Larynx	616.714
Lower extremity	616.719