DERLEME / *REVIEW*

A Review of the History of Different Medical Record Formats, and Their Effects on Medical Education

FARKLI TIBBİ KAYIT BİÇİMLERİ TARİHİNİN VE BUNLARIN TIP EĞİTİMİNE ETKİLERİNİN İNCELENMESİ

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Abstract

In all the sciences, the documents which had already been recorded make the foundation of educational curriculum. In other words, study of past events can be a way to indicate what had happened before, and what must be done in the future. All researchers need to study the information and research results of the others in their own research activities. As it is recommended to use definite writing formats for the essays in order to facilitate studying and presenting research results, it is also suggested to create kind of a format for patients' records so as to facilitate studying medical records and findings gained through each patient's treatment.

Since 1960, the idea of a format for paper-records and document registration has been put forward. Since for the time being paper-records are also used to register documents, researchers are struggling hard to find other formats which can pave the way for re-finding and using medical records. Having a definite style for records can create a framework to register the observations, too. A format called "Problem Oriented Medical Records" has basically developed to increase the medical education level and to present approaches to use patients' records in order to develop favorable education. Other formals such as "Source Oriented Medical Records" or "Time Oriented Medical Records" are also included among traditional formats.

Using these two styles, however, pose more problems than using "POMR" format, since they have their special writing patterns of records and documents. In addition to the recording and documentation directions, there has been advice for all treating team of how to record documents. The ward nurses, for instance, will record the results of clinical care-taking in a "nurse-observatory sheet". Thus, nurse education will be facilitated this way. The existence of a record format can create a primary framework for the records, and will indicate what must be recorded and what must not.

When the content of records includes enough, accurate, orderly and precise data then will be profitable for educational use. They must be produced in a form so that they can be usable in the future.

The author will introduce different records formats as well as their effects on continuous medical education in this essay.

Key Words: Medical records, history of medicine, medical education

Özet

Bütün bilimlerde evvelce kaydedilmiş dokümanlar, eğitim müfredatının temelini oluştururlar. Bir başka deyişle, geçmiş olaylar üzerine çalışmalar, daha önce olanları ve gelecekte ne yapılması gerektiğini göstermenin bir yoludur. Bütün araştırmacılar, kendi araştırma faaliyetleri için diğerlerinin bilgi ve araştırma sonuçlarını incelemeye ihtiyaç duyarlar. Araştırma sonuçlarını incelemeyi ve sunmayı kolaylaştırmak amacıyla, makaleler için belirli yazı biçimlerinin kullanımı önerilirken, aynı zamanda her hastanın tedavisinden elde edilen tıbbi kayıtları ve bulguları incelemeyi kolaylaştırmak için de bir çeşit hasta kayıt formatı oluşturulması önerilmektedir.

Kağıt kayıtları ve doküman kaydı için format düşüncesi 1960 dan beri ileri sürülmektedir. Dokümanların kaydında aynı zamanda kağıtla kayıt kullanıldığından beri, araştımacılar, tıbbi kayıtları yeniden bulmak ve kullanmak için hazırlık yapmada diğer formatları bulmak için çok uğraşırlar. Kayıtta belirli bir biçime sahip olmak, gözlemleri kaydetmede de temel oluşturabilir. "Sorun Odaklı Tıbbi Kayıtlar" adı verilen biçim, esasında tıbbi eğitim düzeyini yükseltmek ve uygun eğitimi geliştirmede hasta kayıtlarını kullanma yaklaşımı sunmak için geliştirilmiştir. "Kaynak Odaklı Tıbbi Kayıtlar" ya da "Zaman Odaklı Tıbbi Kayıtlar" gibi diğer biçimler de aynı zamanda geleneksel biçimler içerisine dahil edilirler.

Bununla birlikte, bu iki biçimin kullanımı, kayıtların ve dokümanların özel yazım biçimleri olduğundan beri "Sorun Odaklı Tıbbi Kayıtlar"ın kullanımından daha çok sorun çıkarır. Kayıtlama ve dokümantasyon talimatlarına ek olarak, tüm tedavi ekibi için dokümanların nasıl kaydedileceğine dair öneriler vardır. Örneğin klinik hemşireleri, klinik bakımın sonuçlarını hemşire gözlem kağıtlarına kaydedeceklerdir. Böylece hemşire eğitimi, bu yolla kolaylaştırılacaktır. Kayıt biçiminin varlığı, kayıtlar için primer iskeleti yaratabilir ve neyin kaydedilmesi, neyin kaydedilmemesi gerektiğini gösterecektir.

Kayıtlar yeterli, doğru, düzenli ve kesin veri içerdiği zaman eğitimde kullanımı yararlı olacaktır. Veriler form şeklinde hazırlanmalıdır, böylece gelecekte kullanılabilir olurlar.

Yazar, bu makalede, hem farklı kayıt biçimlerini, hem de bunların sürekli tıp eğitimine etkilerini tanıtacaktır.

Anahtar Kelimeler: Tıbbi kayıt, tıp tarihi, tıp eğitimi

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Introduction to Medical Records Format

The traditional format of medical records uses papers. In this style, physicians, nurses, and other Health-Care team, record their notes in patients' records. Medical records

indicate the kind, numbers and even extents to which the medical services have been offered. These data can be completed when combined with other data such as those provided from other sources like laboratories, radiology. Pathology, ultra-sound and endoscopies centers as well as data relating to lung functions.

The followings show basic purposes of medical records:[1]

1- Making a programming foundation and making sure of continuous care,

2- Bridging the gap between physicians and other employees who help the patients' care,

3- Providing authentic records of disease pattern and patients' treatment,

4- Providing studying, research and evaluation bases,

5- Providing legal aid and support for patients, hospital and personnel who are responsible to take care of the patients,

6- Providing information to be used in treatment expenses,

7- Research and education.

The Information Management experts consider same specific shortcomings in paper. Medical records such as content-standardization, format-standardization, records deficiencies and lack of enough data accuracy. In this survey we just cling to format-standardization which will lead to removing a fundamental shortcoming in medical records.

What is A Record Format?

"Records format" indicates organizing forms or contents in medical records. There are three basic and common formats: 1- medical records based on sources, 2- medical records based on patients' problems, and 3- integrated medical records. The following descriptions are, of course, other explanations for a "record format": "Health records have been gathered according to different formats which explain the organization of forms and information included in each record" or "Record format means organization of paper-records." The main purpose of record format is to facilitate reviewing record information to be used in required cases. One of the most required cases to record information is to use given data in medical education. Using recorded data, medical students can develop their knowledge, and thus using authentic data, they can give patients more help.[2]

The History

In the fifth century B.C. Hippocrates influenced medical reports to a great degree. He indicated that medical records must follow two goals. These goals are to reflect the period of illness correctly, and to show the cause of illnesses as mush as possible. Yet, considering these goals, the medical records prepared in that era showed the events of illness outbreak rather than the causes of the illnesses. In Hippocrates' aim recording the process and causes of illness as explained by the patients, and having prior information was given outmost importance. Furthermore, getting rid of the pain of illness was attended in clinical reports. Hippocrates point of view founded the process of recording information by Gallen and other physicians. Until early 19th century, physicians recorded their documents on the basis of their observations and stated findings as well as what their patients would feel. In 1916, when Laennec invented his stethoscope, diagnostic techniques began to change. Since other instruments such as ophthalmoscope and laryngoscope had become available, new terms were coined to introduce these instruments and actions done with them for patients. Therefore, the results gained through medical examination substituted the information gotten from patients' explanations. Following 1880, Dr. William Mayo-the founder of Mayo clinic in Rochester, Minnesota organized the registration of medical findings in his clinic. In those days each physician used to record his findings about his own patients in a book called "Ledger-bound". The patient problems were recorded in these books chronologically. As a result, each patient's note was recorded in separate pieces of paper according to the time and numbers of visits. These records wouldn't represent a favorable view of medical records; on the other hand other parts of patient's information

might have been included in other parts of these ledgers. In 1907, preparing "Patient-Centered Medical Records" was proposed in Mayo clinic. Such records would mean gathering all information about patient in a record, but couldn't affect the quality of medical records. Dr. Lawrence L. Weed proposed a form of "Problem-Oriented Medical Records" in 1960, and in 1971 "Time-Oriented Medical Records" or "Integrated Medical Records" were introduced by Fries. "Source-Oriented Medical Records" which is the most traditional record format, however, is the most popular one and is still in use in some medical centers.[3]

Why Record Formats?

To record documents informative elements are not enough by their own. Their arrangement can also create a specific order for recording documents. Where there is a systematic order to arrange informative elements the recorder's mind will not deviate from getting patient's information and recording them. Also he can get and record data in a way to prevent confusion in readers. On the other hand, this will facilitate getting information in a specific field. Suppose you want to find some information about the amount of blood sugar. If the record format confirms to "TOMR" what you just need to do is refer to the data source, i.e. laboratory papers, and look for the answer in the same source according to the data of blood sugar request.

Source-Oriented Medical Records

"SOMR" is the oldest, or better said the most traditional record format. In this format the medical record data are organized in different parts according to the kind or source of service provider. For instance, there might be separate sections considered for history, physical examinations, progress of the illness, lab reports, radiology reports, et. The related forms in each section will be arranged chronologically. So, in this process, the data are gathered in accordance with the series hierarchy, and in this hierarchy, the primary source of medical datum serves the classification scale. The data in each source will be classified according to other scales. In case of laboratory papers, for example, the scale for primary classification is the type of test run, such as biochemical or hematological. These data are also arranged inside each source chronologically. In other words, in this method, the patients' records are gathered on the basis of service-providing sources like physicians, Radiology and Laboratories, without having any logical relationship. Form and notes will be arranged according to their dates (i.e. the latest data). So, the records will be compiled according to their service providers.[4]

Advantages:

The advantage of this method is that the reports of each source are orderly arranged. Therefore it is easy to evaluate the process of treatment, diagnosis and observations.

Disadvantages:

1- Dispersion and the lack of information generality (i.e. it is impossible to find the patient's problem immediately).

2- Enlargement of the record.

3- Re-finding problems.

4- The lack of relationship among treatment groups.

5- No immediate accessibility to all problem, treatments and observations.

Integrated Medical Records or Time-Oriented Medical Records

In this format, all the forms in the patient's record are arranged according to their dates. In nursing station the recent papers are put up and older papers are put under them. (These papers are arranged vice versa upon the patient's leaving the hospital). This format was introduced first in 1971 by Fries this format is primarily used in light-duty centers with the intention of educational use from these records. For instance, the physical examination and explanation may follow the paper indicating the illness progress and nurse reports which precede radiology report or an illness progress.

Advantages:

This method gives a precise view of illness and an accurate answer of treatment to the researcher since all data pertaining to a specific pe-

riod is accumulated in one place. (All care-taking data are put together).

Disadvantages:

- It will be difficult to compare the same data. The high level of fast blood sugar, for example, will not be gathered in a place since they are of the same kind; therefore comparison here may be problematic. (In this method each data is in its place).

- It is not possible for several specialists to record data simultaneously.

Problem-Oriented Medical Records

This format was originally introduced for old people who suffer from more than one problem; those who suffer from several pathologies. Dr. Lawrence L. Weed innovate this format in 1960. This is a systematic format to reflect physician's logical thought in directing treatments. Physicians usually indicate and list clinical problems, and organize them so as to solve them. Each problem in this method is indicated by a number. Treatments and goals are specified with the same number in all the record papers. This action taken by the recording staffs, allows recording the issues related to the same problem or aim. This format contains four major sections:

1- Data base
2- Problem list
3- Initial plan
4- Progress note

The followings are the least information which must be derived form each patient and included in "Data base" section:

1- Chief complaint
2- Present illness
3- Past history
4- Review of system
5- Physical examination

In "problem list", the patient's problems including psychological, characteristic and even economical ones are listed. So in this section the signs, abnormal findings, psychological findings or a specific diagnosis will be included. "Initial plan" or "Treatment plan" is intended to provide more information about the patient's illness, and to make the patient aware of his problem and of what we want to do with it. We will design a specific plan for each problem and separate it to three main sections as:

1- More diagnostic information (which includes probable diagnosis)

2- Treatment (medicine, actions, follow-up plans)

3- Giving directions to the patient

The existing numbers in problem list will clarify treatment plans. "Progress note" consists of some notes about following each problem up. Each note will be indicated with a number or title suitable for the same problem, and includes four elements: subjective, objective, Assessment, and plan statement. This method is technically called "Soaping".

Advantages:

- The records clearly show the treatment aims and methods,

- Medical education or documentation will be facilitated on the basis of physicians' logical thought,

- The qualitative and quantitative control process of medical records are facilitated sine the data are organized.

- The physician must consider all the patient problems

Disadvantages: The greatest disadvantage of this method is its teaching, i.e. this method needs compulsory teaching. As a matter of fact, Dr. Weed suggested that the nurse reporting paper, consulting report, and physician's directions should be designed through this format.

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