DERLEME / *REVIEW*

The History of International Classification of Diseases and Its Effects on Medical Education

HASTALIKLARIN ULUSLARARASI SINIFLANDIRILMASI VE BUNUN TIP EĞİTİMİNE ETKİSİNİN TARİHİ

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Abstract

Different instruments play their roles in every country's educational system. One of these major instruments is medical research. Since variable factors affect the process of examinations, treatments and the progress of the diseases, recording facts are very much preferable to theories. The variety and abundance of facts, however, should not affect the quality of the records.

All the results, gained by reviewing the history of medical records, are worth using in education. Encoding is a scientific process followed professionally in the medical records department in the hospitals to list diseases, surgeries, as well as all the necessary services rendered to the patients.

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

Özet

Farklı araçlar, her ülkenin eğitim sisteminde rol oynarlar. Bu başlıca araçlardan biri tıbbi araştırmadır. Değişken etkenler; muayene yöntemlerini, tedavileri ve hastalıkların sürecini etkilediğinden beri kayıtlama durumları, teorilere göre daha çok tercih edilmektedir. Bununla birlikte durumların çeşitliliği ve çokluğu, kayıtların kalitesini etkilemez.

Tıbbi kayıtların tarihini incelemekle elde edilen bütün sonuçlar, eğitimde kullanılmaya değerdir. Kodlama, hem hastalıkların, ameliyatların listelenmesinde, hem de hastalara verilen tüm gerekli hizmetlerde hastanelerin tıbbi kayıt departmanlarında profesyonelce izlenen bilimsel bir yöntemdir.

Anahtar Kelimeler: Tıbbi kayıt, tıp tarihi, tıp eğitimi

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The Effect of Encoding on Medical Education

The educational system of all countries is always desperately in need of research. Medicine not only needs experimental studies but also requires a review of treatments and clinical experiments done for the patients. Therefore it is necessary to facilitate the recognition and research backgrounds in order to better diagnose diseases and develop treatment processes. For disease diagnosis, their classification with the purpose of facilitating research is one of the known methods. Thanks to the latest findings and studies done with the help of encoding diseases, now it is proven that, for example, the disease "x" is more common among the women that the men, or the disease "y" occurs only in special areas. There are ample amounts of such examples gained through research and studies.

In the present century, the development of the science seeks to facilitate study and provide a better access to research sources. Quality, amount and easy access to information as well as number and even accessibility methods are also required by the researchers.

After encoding processes are completed, a medical or medical student can refer to the medical-record section of the hospital and easily find his required research material from among hun-

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dreds of thousands of files with the purpose of study or analysis. The valuable results gained this way can directly be passed on to the others to serve the educational services.[1]

Introduction

The general situation of politics, economics and culture in each country has a direct effect on the education. Because of the presence of relations inside a system, when a factor changes, there would be subsequent changes on the other factors. Therefore there must be a balance between all the educational measures and the social norms of that country.

Different instruments play their roles in every country's educational system. One of these major instruments is medical research. And therefore all those who are interested in medical education are completely aware of this instrument's value. In medical sciences there are different ways to research. Some of these approaches relate to the past data upon which a researcher must base his studies. The best and the most accurate data in this respect can be driven from the patients' files-better known as medical records. A succession of experiences gathered clinically from the patients, i.e. treatment procedures of the patients are completely recorded in their clinical records. The final results of the treatments are of great value to the researchers.

It is certain that the result of the studies based on the treatment abstract has made the foundation of scientific researches.

Since variable factors affect the process of examinations, treatments and the progress of the diseases, recording facts are very much preferable to theories. The variety and abundance of facts, however, should not affect the quality of the records.

All the results, gained by reviewing the history of medical records, are worth using in education. In a study about the frequency of cancer among men and women, for instance, we can use valuable facts, which can be well used as an educational resource to prevent these diseases among the mentioned group.

Sometime the variety and abundance of information in a record may be so confusingly organized that the researcher may face problems such as the study and analysis of the facts. For example, it would be almost impossible for the researcher to study and analyze hundreds of records about the same subject, i.e. the same disease, unless they are primarily categorized.

Encoding is a scientific process followed professionally in the medical records department in the hospitals to list diseases, surgeries, as well as all the necessary services rendered to the patients. This encoding or categorizing process has a systematic structure and uses series of books called "International Classification of Diseases" (ICD). These books are published by "The World Health Organization" (WHO) and are provided for the countries along with their appendices.

The existence of these international classification books leads to procedural harmonies in different countries. This can be a good solution to the problem of categorization of high-volume information in the field of Medical Record Diagnosis, treatment, and all the services taken with respect to the disease can be classified scientifically and quickly by using this method and prepared for the purpose of research.

Regarding the aim, and the kind of hospitals, the encoding systems might be different in various medical institutes. Therefore, there are various encoding books, too. Some of these books contain information such as: the classification of cancers, psychopathic diseases, treatment and diagnostic measures, injuries and handicaps, the external causes of injuries, injuries caused by sports; job accidents.

In encoding process, after patient leaves the hospital-or in other words after the patient's record is closed and all required data is completed-according to the number of simultaneous illnesses and in accordance with one of the classification books, one or more codes are allocated to the record. Therefore, after classifying all the record with the same diagnosis, their codes will be the same, too. Then, because these records are classi-

fied systematically, it would be much easier to study and perform a research on them. Thus, referring to these records with the purpose of studying or gaining information, a researcher can easily extract his required data from among tens or even thousands of files. Apparently, the results gained by this way can directly serve the purpose of education.[1]

Encoding Process

Encoding means allocating one character or number or a character with a number to predetermined subjects with the purpose of easy reference and access to a specific information. This process leads to a more precise access to information and saving time in this respect, too. This process guarantees the quality of data, too. This is because, providing that there is any contradictions in data registration, these problem must be removed and harmonized for encoding.[1]

The History of Classification

Since long ago, different groups such as anatomists, pathologists, statisticians, physicians and lawyers, have always tried to classify diseases. Each of these experts classified diseases, injuries and causes of deaths according to their own viewpoints and considered the results as the best way to solve studding problem.

But Sir George H Knibbs, an Australian statistician known as Sauvage, in late 18th century made the first attempt to classify diseases systematically. Since then many fundamental reforms have brought about in this field. The existing classes in classification system have been designed in a way to ease statistical studies. The nature of a disease can have a separate title in classification system only when it happens very frequently, or when its importance and situation allows its separation as a single independence class.[2]

John Graunt was also the first who carried out his statistical studies on diseases. In 1837, William Farr the first medical statistical expert not only prepared the best possible classification of diseases, but took the first step in the progress of international classification as well. The importance of using a homogeneous classification of the causes of deaths was very seriously introduced in the first statistics congress held in Brussels in 1853. In this congress, Dr. Farr and Dr. Marc D Espine were requested to prepare a list including medical expressions and causes of deaths. In another congress held in 1855, Dr. Farr and Dr. Spine presented separate lists, which were based upon different principles. These lists were based on international classification of diseases with the viewpoint of anatomy. In 1891, a committee with the management of Dr. Jacques Bertillon was established to prepare a classification of the causes of deaths. The report of this committee was presented to the International Statistics Organization in 1893 and was approved by this organization in the same year.[3]

England, Germany and Switzerland gave their ideas for the last review of this classification. What Dr. Farr represented formed the basis of this classification that is a differentiation between general sicknesses and the diseases affecting special organs or anatomical parts. Dr. Bertillon's classification had three parts:

1- An abridged classification including 44 subjects,

2- A classification containing 99 subjects

3- A classification containing 61 subjects

Dr. Jesus E. Monjaras was the one who used this classification, which was known as Bertillon's classification for years, in Saint Luise, Mexico, for the first time. In 1898, the American General Health Association suggested the use of Bertillon's classification as well as its ten-year review. 26 countries carried out the first review in 1900. And in 1909 the second, in 1920 the third, in 1929 the fourth and in 1938 the fifth review was done. In 1923, M. Michael Houber, a successor to Bertillon, requested the experts' reformatory ideas. In 1946 the International Health conference was held in New York and the responsibility of preliminaries to another ten-year review was given to the World Health Organization (WHO). The sixth review lead to an agreement on international laws to choose the causes of death. In 1955 Paris hosted the seventh

conference, which was affiliated with the World Health Organization and was suggested by the experts of Health statistics committee in WHO.[4]

In the eighth edition, a two-volume book was published the first volume of which included a numerical list and the second on alphabetical one. This book contained 17 chapters and a supplementary classification.

The International conference for the ninth edition met in Geneva in 1975. After a review, a two-volume book, along with a new classification, called "International Classification of Procedures in Medicine (ICPM) was published by the World Health Organization.

In 1983, the international conference for the tenth edition was held in which different countries presented their ideas. After the suggested changes were applied, a three-volume book was published in 1992, and has been used since 1993. Since there is no eleventh edition yet, we are still using the tenth one other adoptions of ICD are shown in the chart below.

The Application of International Classification of Diseases:[5]

1- This procedure leads to a harmony of the title of disease diagnosis and treatment in different countries in a standard form.

2- The statistics gained in this way will have a common meaning and will be measurable and analogical.

3- Preparation and extraction of prepared statistic will pave the way for a better research service.

4- An access to actual information, and preparation, and qualitative examination lead to a better treatment.

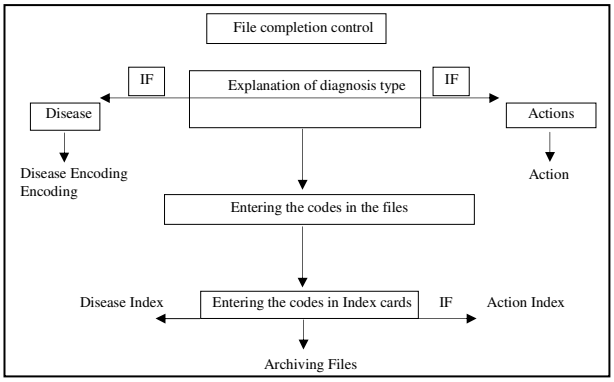
5- Medical education will be easily performed.

6- There would be an easier access to different files.

7- Strange expressions and diagnoses will be removed if the physicians are aware of standard diagnosis titles.

Encoding steps

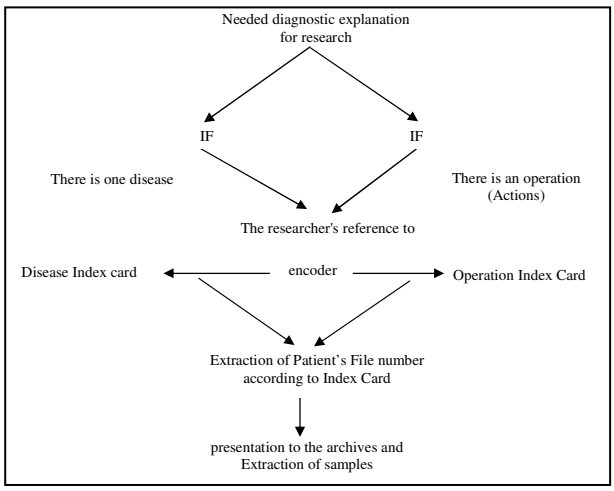
After getting acquainted with classification book, we must necessarily take a look at encoding steps. To make it easier, these steps are show in the chart below:



Archiving Files

After encoding completion, it is necessary to summarizes all the codes and to put them in smaller instruments. These instruments are professionally called "index cards". Whenever needed, the disease index or operation index will be used. Each index card includes forty files with different file numbers, all which have the same diagnostic titles. In other words, using each index card, one can have access to forty records for research purposes.

Re-finding steps and research uses:



REFERENCES

1. Mehdipour Y. An Introduction to ICD-10 with an Approach of Encoding Methods. Sonbole Publication, 2001.
2. Safdari R, et al. A Guide-line to International Classification of Diseases according to the Ninth Edition, Research Deputy of the Department of Health, Treatment and Medical Education Publication, 2001.
3. Ajami S. A Guide-line to International Classification of Diseases, 9th ed. Research Deputy of Isfehan Medical University, 1995.
4. Ahmadi M, Sadoughi F. Encoding of Diseases According to 10th ed. Zarin Publication, 1996.
5. International statistical classification of diseases and related health problems. 10th revised. Geneva: WHO Publication, 1992.