Tips of the actual use of electronic medical records in Japan for epidemiological studies

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Health insurance system in Japan is provided in all citizens, and is basically fee-for-service. This means Health Insurance knows the health information of almost all citizens in Japan. However, those informations are rare to be used in epidemiological studies. The reasons are that the electronization of information does not come out 100%, that identification of multiple accounts under the same name as a single entity is difficult, and that many people show disapproval for use of those informations. However, these data will be used sometime soon. Thus, it will be necessary for researchers to know about, such as billing method of medical insurance in Japan before that.

In this announcement, we show a structure and a storage method of electronic medical information in Japan. As an example, we introduce "Dynamics", electrical chart, which data are open. Since it is important to know the difference in data before and after the making of the medical bill in the computer.

Characteristic of medical record in Japan.
1) Database have an accurate medical information with an extremely little error.
2) There is deleted data when the bill is made.
   A) Patient address and telephone number
   B) Usage of medicine
   C) Content of diagnosis and treatment not requested
   D) Date and time

Moreover, it is different from the case to analyze the bill. It has the feature as below.
1) Database have relativity of disease with family
2) When insurance changes on the way, it is possible to pursue it.
3) Database have relativity with vaccination

Since few researchers knowing these characteristics well, effective utilization of these data is not carried out, or people imagine a dreamlike story without knowing the present conditions.

The electronic chart "Dynamics" are used for 3600 medical offices, and have the community of the doctor who know those characteristics well because database structure is not concealed. Also, we think that this project ties the big data to the epidemiologist.