Abstract

The information in the medical records serve many purposes: they can be used for diagnosis and therapy, medical documentation contains information that can be the basis for financial authorities for treatment or for pumping reimbursement from health insurance.

The data can be used in statistics and other scientific purposes.

The aim of study is to verify the simplicity of data process implementation and time of data storing for modification of classical paper WHO dental card, lifetime dental EHR controlled by keyboard and lifetime dental EHR controlled by voice.

All three methods were applied on 126 patients. At first the patients were inspected by a standard technique (communication between dentist and nurse) and the data recorded into the paper WHO dental card. The same person recorded all data to lifetime dental EHR using keyboard and using voice. Then we compared the time, which was needed for recording the data using these three methods.

Using Friedman test we found very significant differences in time of recording among three methods ($p < 0.001$). We can see that the paper WHO dental card was recorded quickly, but its rise due to missing electronic form is difficult. Times for recording data using keyboard or voice in lifetime dental EHR were not significantly different.

The clinical practice demanded to find ways to eliminate the need to touch peripherals like keyboard mouse and touch screen. Therefore the automatic speech recognition was added to enable dentist to use the software without a single touch. This way we eliminated the need for computer operator and unnecessary hygienic procedures (washing hands, changing gloves etc). We checked electronic health record in patients with special needs.

Key words: dentistry, data storing, electronic health record, voice control, patients with special needs