MEDINFO 2007
HISA Ltd Australia
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What Health Influences Are Caused By EMR Working? - In Case of Japanese Nursing Situation

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Abstract

The purpose of this study was to determine how nurses used visual display terminals (VDT) and whether the use of VDTs had any influence on their health. In our study, the use of the EMR and the health influences of introduction of the EMR were surveyed using a questionnaire in a general hospital. The results indicated that VDT works were conducted in nurse stations rather than at the bedside. Only about 10% of nurses did exercises to prevent neck, shoulder and back pain before starting work. Since more than half of the nurses remained standing while inputting, extra guidelines should be developed for this aspect as the MHLW guidelines currently only deal with seated operations. Health influences after introduction of the EMR, more than half the subjects complained of worsened symptoms including eye strain, stiff shoulders and neck, and general fatigue, all of which are signs of VDT syndrome.

Keyword:

nurses, VDT works, electronic medical record system(EMR), health influences

Introduction

Currently in Japan, the use of EMR and digital ordering systems in hospitals is increasing. Since medical service is one of the seven main fields of the e-Japan priority policy program, it is assumed that digitalization will be promoted in medical facilities. Accordingly, appropriate workplace health measures should be taken in response to changes in the working environment of nursing personnel.

Methods

1) Study period: March 8 to 29, 2005. 2) Subjects: Nursing care personnel (378 individuals) working at a private general hospital (477 beds) in Japan which had introduced an EMR around a year previously. 3) Method and contents of study: Self-reported questionnaire study. A questionnaire was delivered to the subjects and was recovered on completion under ethical cares. It consisted of questions regarding the VDT working situation of EMR((1)posture, (2)place, (3)adjust materials around PC, (4)input device, (5) time per one use of EMR, (6)brightness around PC on each shift, (7)setting-up exercise before working) and the health influences (eye strain, low vision, dried eyes, stiff neck and shoulders , numbness of fingers, back pain, fatigue, headache, stress, gloomy) after using the EMR.

Results

323 questionnaires delivered were recovered (85.4% recovery). 193 subjects (59.8%) were in their 20s, 80 (24.8%) were in their 30s, 27 (8.4%) were in their 40s and 19 (5.9%) were in their 50s. Four subjects (1.2%) did not reveal their age. The average number of years working at the hospital was 5.67.

1) The VDT working situation of EMR

VDT works were conducted in nurse stations rather than at the bedside. Since more than half of the nurses remained standing while inputting records.

2) The health influences after introduction of the EMR

Only about 10% of nurses did exercises to prevent neck, shoulder and back pain before starting work. More than half the subjects complained of worsened symptoms including eye strain, stiff shoulders and neck, and fatigue, all of which are signs of VDT syndrome (Figure 1).

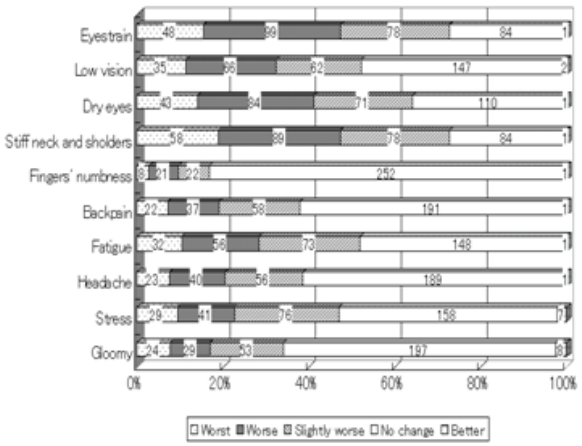

Figure 1 - Subjective signs of health influences after using EMR

Conclusion

Nurses' VDT working situations are different form those of office workers etc. Workplace health measures for VDT operations by nurses should be urgently revised based on the results of this study.