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[AP1-E2-2-04] A Discussion on Two-Way Nursing Information Coopretion System Interlinking Hospital and Home

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Keywords: Outpatient Nurses, Information Sharing, Regional Cooperation

The consultation rate in Japan is the second highest following South Korea among OECD countries and the number of its patients aged 65 or older has been increasing in particular. In addition, many of its elderly people are chronically ill patients who are in and out of the hospital and visit more than one hospital, and therefore there has been a sense of difficulty in sharing information between their hospitals and home. In this study, for the purpose of discussing challenges in information sharing necessary to achieve regional cooperation, the nursing records of 42 outpatients who had been receiving continuous supports at 475 beds of regional medical base hospitals . The analyses of the outpatient nursing records found that their main contents were (1) the incidences of adverse reactions, (2) in-home living and the lack of self-care, and (3) information on nursing-care shortage. Regarding information cooperation among nurses for outpatients, the analyses of the nursing records showed that there was no record on information cooperation with reginal medical institutions and such cooperation stayed within the hospital. For the promotion of comprehensive regional care, it is important to build a system in which nurses for outpatients conduct two-way nursing information cooperation with their home. From now on, it is necessary to discuss the development of a regional two-way information cooperation system based on the actual status of elderly people who frequently visit multiple institutions.

A Discussion on Two-Way Nursing Information Cooperation System Interlinking Hospital and Home

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Abstract

The consultation rate in Japan is the second highest following South Korea among OECD countries and the number of its patients aged 65 or older has been increasing in particular [1]. In addition, many of its elderly people are chronically ill patients who are in and out of the hospital and visit more than one hospital, and therefore there has been a sense of difficulty in sharing information between their hospitals and home. In this study, for the purpose of discussing challenges in information sharing necessary to achieve regional cooperation, the nursing records (SOAP form) of 42 outpatients who had been receiving continuous supports at 475 beds of regional medical base hospitals in A City (hereinafter A Hospitals). The analyses of the outpatient nursing records found that their main contents were (1) the incidences of adverse reactions, (2) in-home living and the lack of self-care, and (3) information on nursing-care shortage. Regarding information cooperation among nurses for outpatients, the analyses of the nursing records showed that there was no record on information cooperation with regional medical institutions and such cooperation stayed within the hospital. For the promotion of comprehensive regional care, it is important to build a system in which nurses for outpatients conduct two-way nursing information cooperation with their home. From now on, it is necessary to discuss the development of a regional two-way information cooperation system based on the actual status of elderly people who frequently visit multiple institutions.

Keywords:

Outpatient Nurses, Information Sharing, Regional Cooperation

Introduction

The elderly population of Japan is projected to increase continuously, exceeding 26.5% of its entire population in 2055. Its major causes of death include malignant neoplasms as the leading cause, cardiac diseases as the second, and senility as the third; Its mortality rate associated with cardiac diseases in particular has been demonstrating an increasing trend. Many elderly people often suffer from more than one chronic disease, leading to the high frequency of their visit to the hospital [1]. Additionally, people in Japan enjoy a free access to medical institutions and accordingly not a few of them visit a specialized hospital and a home healthcare institution (clinic or equivalents) at the same time. For maintaining the ongoing medical care, it had been a general practice to promote cooperation using medical information possessed by doctors and discharge summaries prepared by nurses. Moreover, there had been few previous studies dealing with nursing for outpatients and therefore the actual status of support contents and regional information cooperation had not been revealed yet then [2]. In this context, this study was designed to discuss challenges in the building of a nursing information cooperation system interlinking the outpatient department of a hospital and patients' home from the contents of one-year outpatient nursing records on 42 outpatients aged 75 or older at 475 beds of regional medical base hospitals in A City (hereinafter A Hospitals).

Research Method

1. Analyses of outpatients registered for continuing nursing intervention
2. Purpose: To discuss challenges in the building of a nursing information cooperation system from the actual status of continuous nursing for outpatient of A Hospitals and nursing records on elderly patients receiving continuous supports
3. Survey Period April 2014-March 2015
4. Survey Object: Nursing progress reports and profiles for 42 outpatients aged 75 or older among 471 outpatients subject to continuous nursing intervention at A Hospitals (hereinafter Registered Patients).
5. Analysis method

   1) A descriptive statistics analysis as well as a word frequency analysis, a keyword analysis and a language network analysis using a text mining software program were conducted on one-year nursing records for those patients subject to this study.

   2) The tool was developed by NTT Mathematical systems.
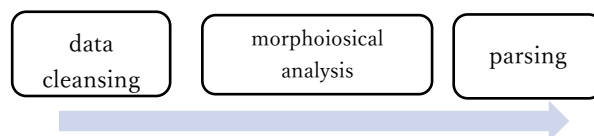   3) A flowchart the process of text mining (Figure 1).

Figure 1- This process checked by another clinician.

   4) This study created a dictionary and checked synonyms to ensure accuracy as much as possible.

Ethical Consideration

This study was approved by Ethical Review Committee of Graduate School of Applied Informatics, University of Hyogo and the ethical review committee of research cooperation institutions.

Results

1. The analyses results of outpatients registered for continuing nursing intervention (hereinafter Registered Patients).
   1) Nursing interventions for Registered Patients (471 people)

include symptom control (32%) as the most frequent intervention and domiciliary oxygen therapy (18%) as the second most frequent one.

2) As for Registered Patients (471 people) by medical department, the largest number visit the urology department followed by the respiratory medicine department, the digestive surgery department and the gynecology department. Meanwhile, the number of Registered Patients visiting the cardiovascular internal medicine department and the diabetes medical department which provided medical care to many chronically ill patients tended to be small.

2. Results of Analyses on Nursing Records for 42 Elderly Patients Aged 75 or Older.

1) Results of Language Network Analysis The patients' attributes were analyzed according to the following categories: S (subjective information), O (objective information), A (assessment), P (nursing plan) and D (nursing diagnosis). Their details were: S (subjective information): sleeping, pain and suffering; O (objective information): pain, adverse reactions of anticancer drugs, information on family members and instructions on in-home therapy; A(Assessment): burden on family members, adverse reactions of anticancer drugs and burden of nursing care (Figure 2) P (nursing plan): state observation, plan continuation and mental aspect; and D (nursing diagnosis): adverse reactions of anticancer drugs, shortage of self-care, burden of nursing care and skin symptoms (Figure 3).
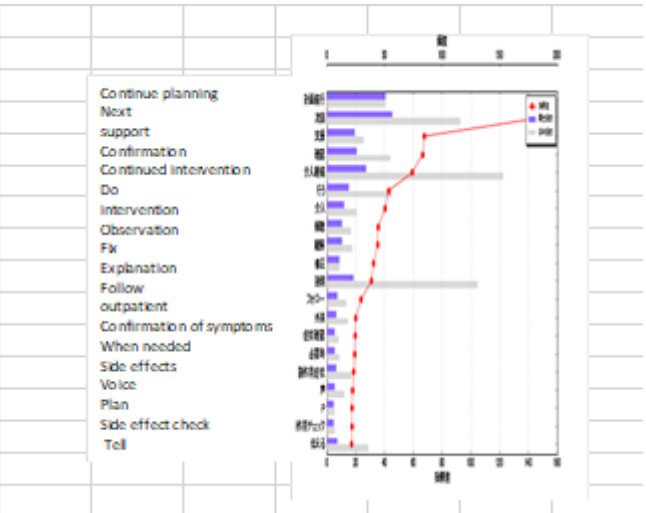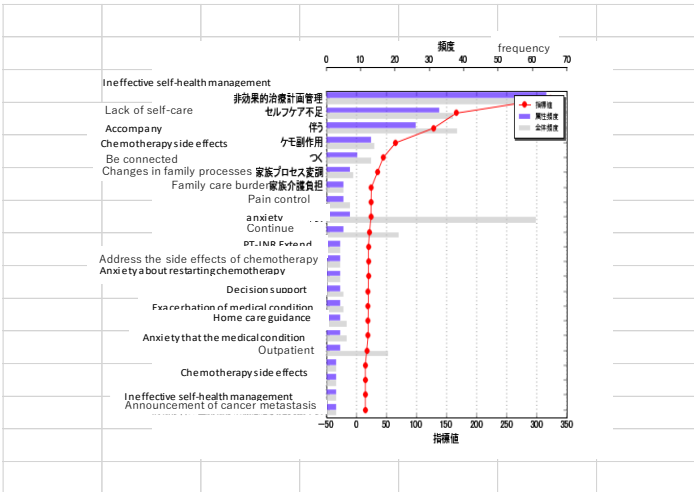

Figure 2- A(Assessment)

Figure 3- Nursing Diagnosis Characteristic words

While mentioning the burden of nursing care and the application for nursing care in A (assessment) and D (nursing diagnosis), nurses did not write down anything in P (nursing plan) about the cooperation with nursing staff members and care managers responsible for in-home care. It was found that nursing interventions for outpatients mainly observed and supported the patients' symptoms and treatment adverse reactions on a continuing basis.

Discussion

Nursing interventions for outpatient appointment patients use the patient profile in the electronic medical record and daily nursing records to coordinate information (Figure 4).
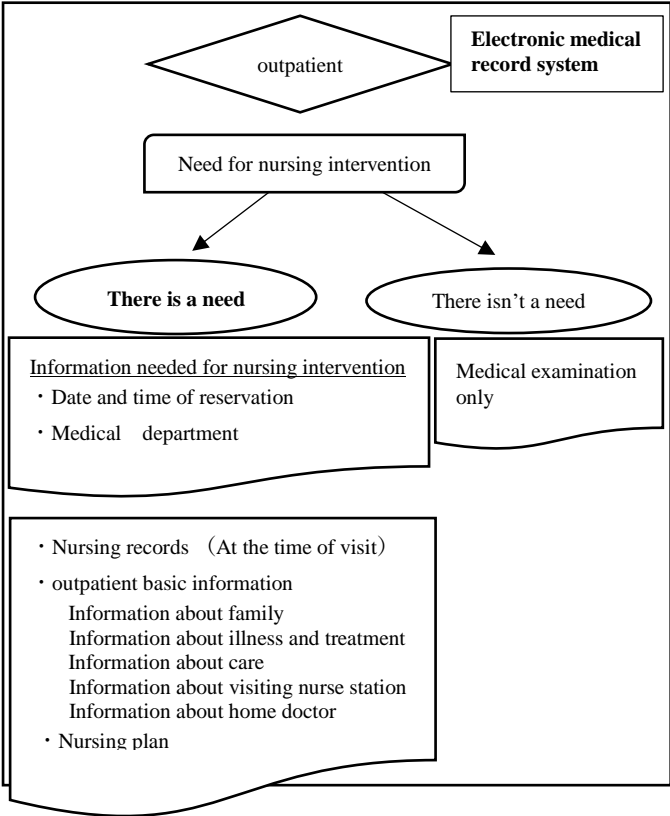

Figure 4-

Information cooperation between a hospital and a home caregiver is often limited to medical information between a hospital doctor and a home doctor (Figure 5).
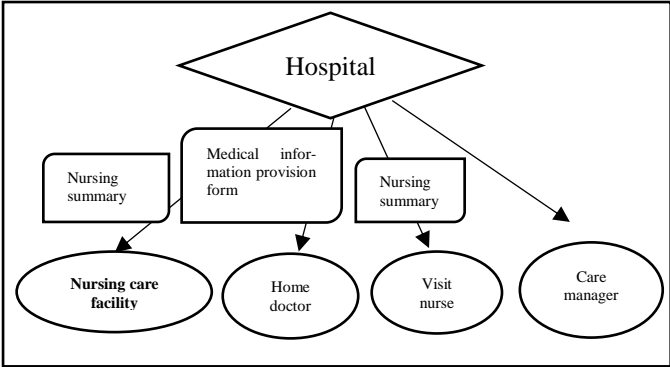

Figure 5-

The results of this study revealed that nurses for outpatients considered in-home living, the lack of self-care and nursing-care shortage as D (nursing issue) and accordingly provided supports to home-care patients when they visited the hospital. Meanwhile, regarding regional cooperation, it was suggested

that in spite of the understanding of the situation where the patients felt the difficulty in home care, information sharing with nursing staff members providing home care was not enough. To date, nurses for outpatients have been building a system mainly for in-hospital cooperation in order to continuously support them even after the discharge from a hospital. Further, previous studies on nurses working for a clinic who supported home care pointed out the lack of cooperation with nurses working for a hospital [3]. Elderly patients living in Japan visit more than one medical institution at the same time including a regional base hospital, a specialized hospital and a home-care medical facility.

With such backgrounds, for the purpose of supporting home-care patients who also visit a hospital, it is considered important for nurses working for a specialized hospital including a regional base hospital to develop a nursing information sharing system emphasizing two-way regional cooperation instead of a one-way information sharing system like discharge summaries which stay within the hospital. It was indicated that there was a necessity to discuss (1) the development of a nursing information sheet to be brought by patients themselves and (2) the building of an information cooperation system interlinking nurses for outpatients working at a regional base hospital and medical institutions and nursing-care facilities in the region as a two-way regional cooperation system appropriate for the patients who visit a regional medical institution.

Conclusion

For the promotion of comprehensive regional care, it is important to build a system in which nurses for outpatients conduct two-way nursing information cooperation with their home. From now on, it is necessary to discuss the development of a regional two-way information cooperation system based on the actual status of elderly people who frequently visit multiple institutions.

References

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