Making a decision support system with the electronic medical record

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Introduction

- *We have been developed and used the electronic medical record system for 12 years.*
- *We adopted the diagnosis and the unification of terminology for the common understanding.*
- *We make the model of the diagnosis process and make the preparation of the system.*

What is necessary to us?

- Electronic Medical Record?
  - For data sharing?
  - For data exchange?
- What is the outcome corresponding to the effort?
  - Various searching?
  - Evidence
  - Evaluation of the process

Our trial system

- We made from patient information to SOAP that use as the record of the electronic medical record.
- We added the system that able to trace of the diagnosis process.
  - It is making the problem list of patient information and summarized the symptom. (Cj)
  - It is making the goal corresponding to the problem. (Gj)
  - It is making the plan corresponding to the cause of diagnosis. (Pj)
  - It is making the evaluation to the plan. (Ej)

Our Goal

- We intend the unification of terminology by using diagnosis.
- The plan should be able to be evaluated clearly.
- The clinical path should be able to be evaluated clearly.
- The physician and nurse are able to make a plan.
- Without relying on the experience years, the physician and nurse are able to collect at least necessary patient information in this system .
- By connecting problem information and the evaluation result in this system, we are able to evaluate the justifiability of diagnosis.

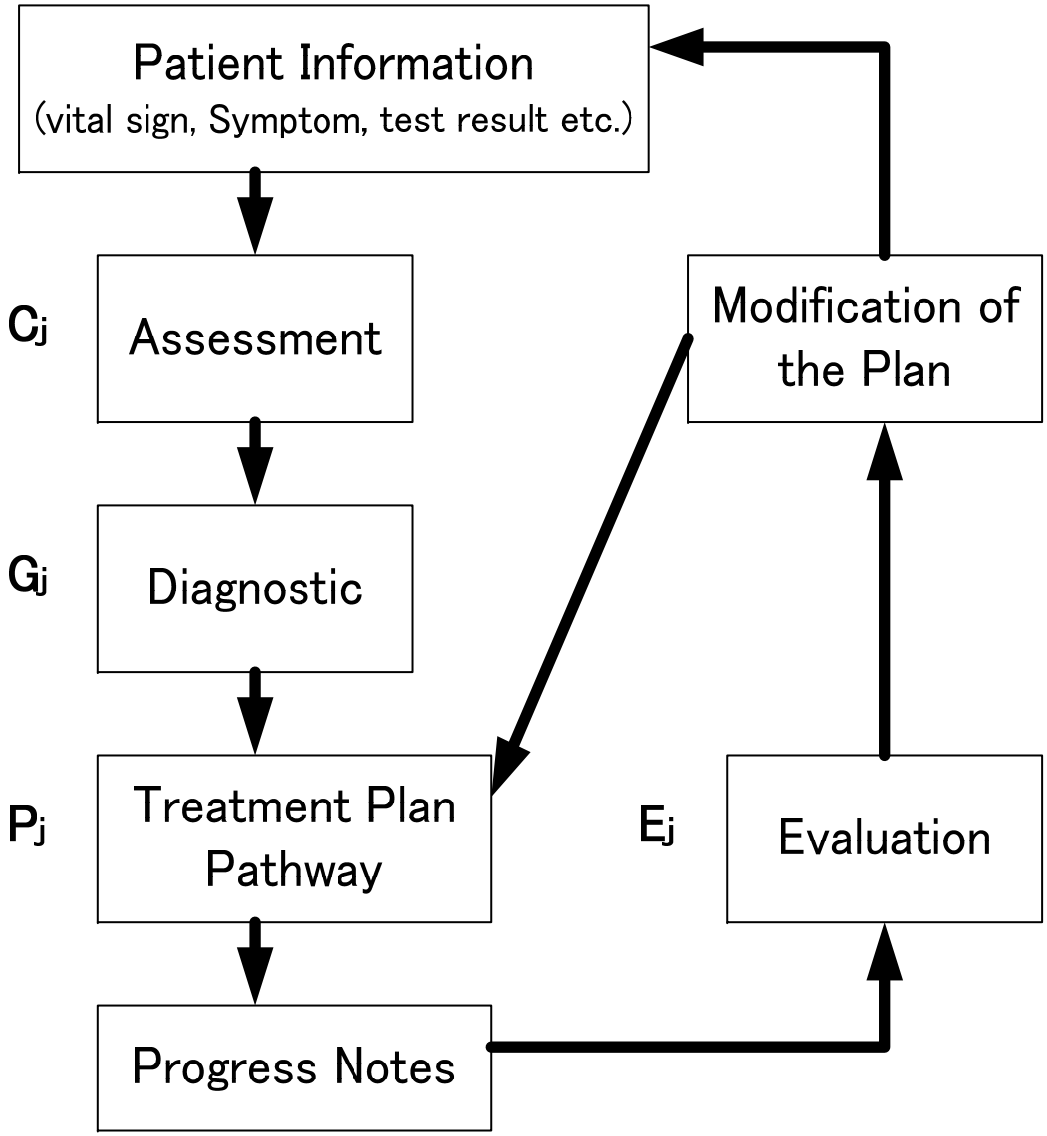

Figure 1 – System flow and Trace points

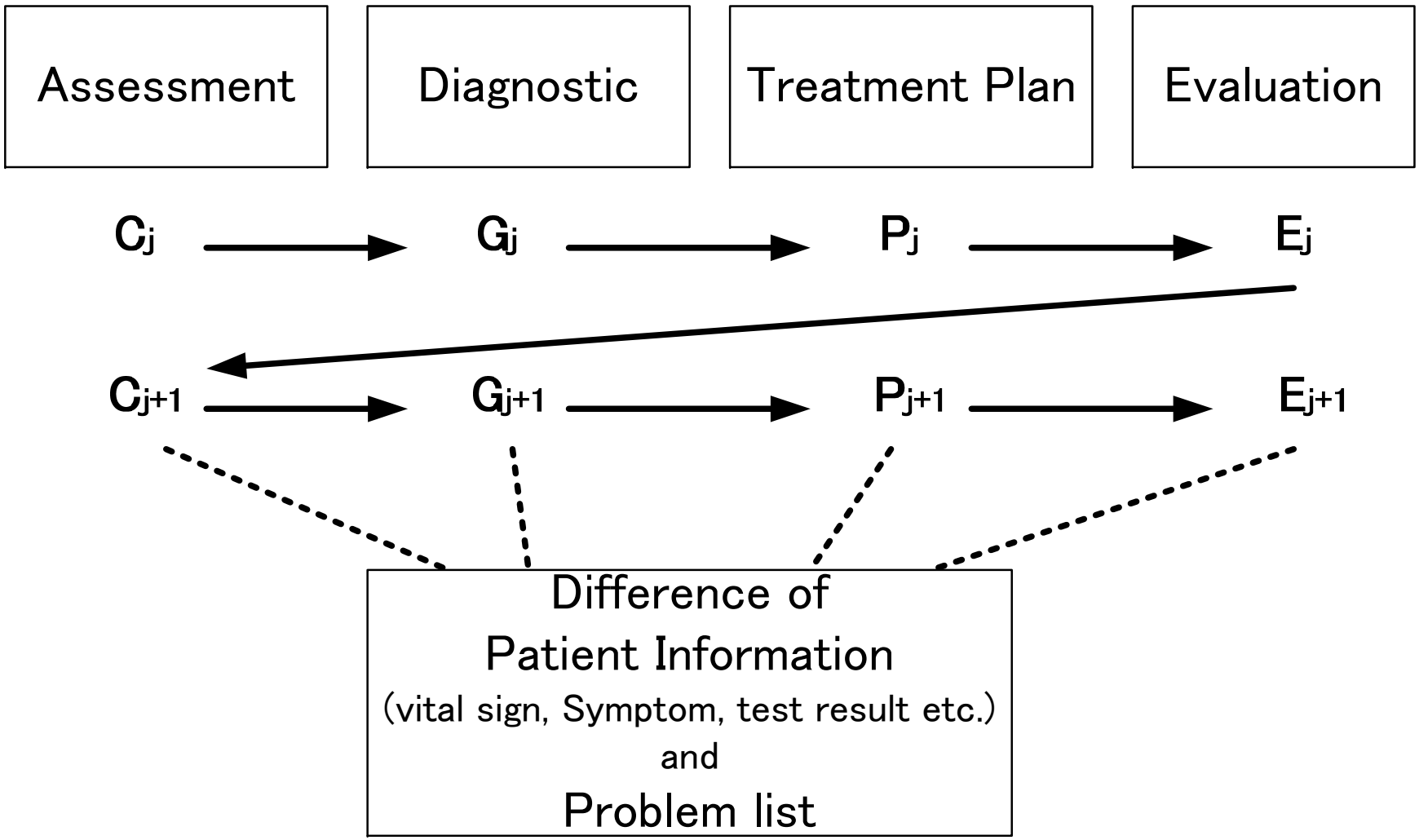

Figure 2 – Data Relationship and decision cycle

What kind of point became clear

- Process of diagnosis
- Information that contributed to diagnosis
- Evaluation of the critical pathway
- Difference of the process in the experience years
- Important point of judgment on process
- Factor of the changes of the process
- Factor of goal setting

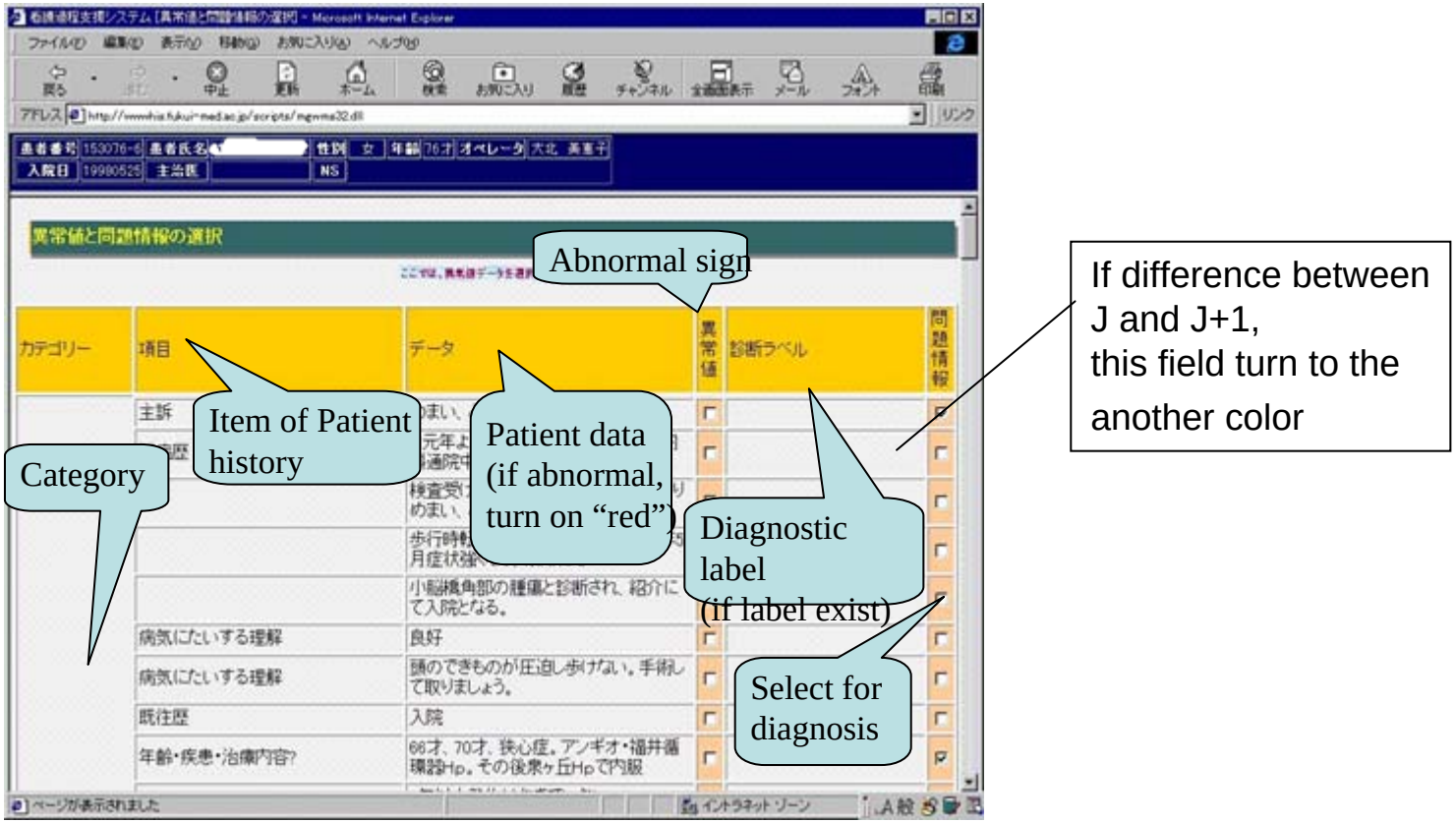

Figure 3 - Example screen of the Problem selection

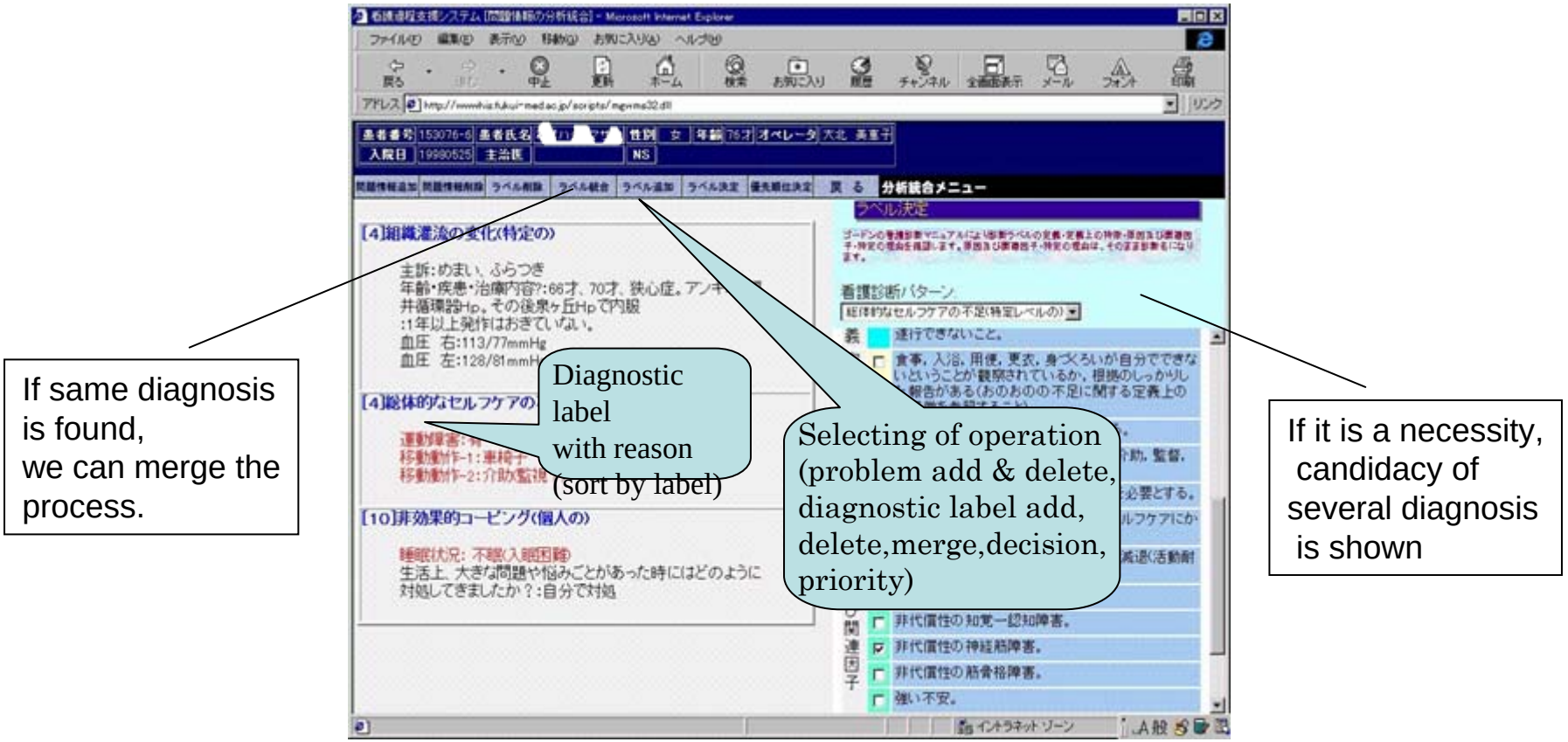

Figure 4 - Example screen of the Diagnosis

Results

- The system of the region of the physician is incomplete, although the system of the nursing region was finished.
- It is possible to supports the process of the nursing diagnosis. The support of diagnosis and plan has obtained many satisfactions.
- we are using to education and discussion such the analysis result.

References

[1] Yamashita Y, Gejyo F. A trial Electronic Medical Re-cored System using the Markup Language. 9th world congress on Medical Informatics, Proceedings, pp.127-127,1998.

[2] Ookita M, et al. Making a decision Support System for Nurse Care Planning. 9th world congress on Medical In-formatics,Proceedings, pp.565-565,1998.

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