



Nurses' perception of their documentation experiences in a computerized nursing care planning system

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Introduction - CNCPP

- Computerized nursing care plan (CNCPP) systems are nursing information systems designed to construct care plans by providing a selection of nursing diagnoses, defining characteristics, related factors, expected outcome goals, related nursing interventions and outcome evaluations.

Introduction (con.)

- As the CNCP systems have been designed to reflect the patient care efforts, understanding how nurses view their documentation process certainly affects this technology use.
- The purpose of this study was to explore how the CNCP system influences nurses' perceptions of this documentation process in making care plans.

Literature Review

- Care plans have been viewed as guidelines for patient care.
- The benefits of the CNCP: time saving, effective and efficient, and identifying more patient problems and interventions.
- Disadvantages: losing nursing expertise, paperwork requirement, and de-individualized content.

Literature Review (con.)

- CNCP often requires a standardized format such as nursing diagnoses use.
- Constructing care plans requires that nurses integrate their knowledge base, long-term memory and problem-solving strategies - diagnostic reasoning process.
- The content design of the CNCP may influence nurses documentation process.

Method

- A qualitative approach with one on one in-depth interview was applied on 20 nurses.
- Data collection was performed from May to July of 2002 in a medical center.
- Recruitment criteria: nurses who working on the unit for at least 6 months.
- Data analysis was based on Miles and Huberman's data reduction, data display, and a conclusion verification process.

Method (con.)

- Interview questions were
 - *What kind of information do you need (such as defined characteristics, related factors, signs and symptoms) in making care plans?*
 - *What do you think about the CNCP in providing these data for making the care plans?*
 - *Would you please give an example of how you applied the CNCP content in your charting process?*

Study Setting

- The study was conducted in three respiratory care unit.
- The nurses in these units had been encouraged to express their opinions about the pros and cons of the CNCP.
- The hospital has implemented the CNCP since 1998 for all inpatient nursing units.
- Nurses are supposed to devise care plans for every newly admitted patient.

Findings

- Three major concepts regarding nurses' perceptions of how the CNCP content influenced their documentation process:
 - A reference list to aid memory
 - A learning tool for patient care
 - A vehicle for applying judgment to modify care plan content.
- Excerpts from participant interviews are given below to support these major themes.

Finding1 – reference list

- Selecting from the available items
 - The CNCP was viewed as an aid that provided a convenient list when they had trouble making nursing diagnoses.
 - *If the patient has no fever, no respiratory problems, and isn't in a fall prevention program, I can glean the list to pick up a nursing diagnosis instead of squeezing out something to write.*

Finding1 – reference list (con.)

- For confirmation purposes
 - *I might check the references for confirmation, but that doesn't mean that I don't know how to care for patients.*
 - However, if they found no apparent match with a patient condition, '*knowledge deficit*' would be used to indicate a need for health education about care procedures.

Finding 2 – learning tool

- Applying the obtained information on care
 - *When I click on certain nursing diagnoses, many interventions and goals will pop up. If I learn that there are two more goals listed for a particular problem than I used to know, I may apply these two to a patient if the condition calls for it.*
 - *For pain control, I used to ask the doctor for pain relievers. After learning from the care plan about other pain interventions, I will apply one next time before asking for the medication.*

Finding 2 – learning tool (con.)

- Learning/charting step by step
 - *Most nurses used 'risk for trauma' on patients with bloody sputum, but I checked the textbook and learned that it was inappropriate. After that, I didn't use it as every one did*
 - *I used to do what I was supposed to do for the patient, and didn't realize that it could be documented in such a formal way, with related factors, defined characteristics, diagnosis, goals and intervention.*

Finding3 – judgment for charting

- Revising the content
 - *Some related factors for fever are due to the disease, not environmental factors, but the computer can't distinguish the difference. You need to correct or revise it.*
 - *I found that a patient still had a problem with airway clearance, but that diagnosis had been replaced by another one, so I put it back, but not until the night shift when I had some spare time.*

Finding3 – judgment for charting (con.)

- Prioritizing the problems
 - *Problems may not appear every day, but they do not go away either. If a patient is diagnosed with pneumonia, even though he/she doesn't have a fever now, I won't delete the problem.*
 - *Suppose the care plan lists two problems, 'pain' and 'ineffective breathing pattern', with no priority for which one should be solved immediately, but the patient is concerned about his constipation. Which one do you think should be listed first on the care plan?*

Discussion

- Nurses using the CNCP generally thought that it did save time and paper, but the tradeoff was losing desired content to describe patient conditions.
- Information processing theory: human beings have limited capacities for processing information in long-term memory.
- The CNCP provides browsing lists without adding to cognitive overload.

Discussion (con.)

- “Knowledge deficit’ has been selected most commonly, but this diagnosis has been proposed to be removed from the NANDA list since it doesn’t meet the required criteria for defining nursing diagnoses.
- Experienced nurses apply their knowledge and experience rather than use care plans to guide their day-to-day care activities.

Discussion (con.)

- Nurses first selected what are available on the list to match with patient condition.
- When they were getting used to this charting process, they could confirm their thoughts of patient problems by verifying with the listed items or textbooks.
- Finally, when they accumulated certain experiences, they applied their judgment on revising the care plan content.

Conclusion

- Nurses charting patterns: a reference, a learning tool, and a vehicle to apply their own judgment to modify care plans.
- Nurses could learn new skills and knowledge introduced by technology, but any effects on nursing practice, such as care experiences, may deserve further attention.

Suggestions

- Suggestions for future studies
 - Longitudinal study for factors of experiences and knowledge on different charting or documentation patterns.
 - The measurement of the relationship between charting quality and patient care outcomes.
 - Applying diagnostic reasoning process on investigating the effect of content design on charting behaviors.

References

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A bright yellow sun is positioned at the top center of the frame against a clear blue sky. Below the sun, a traditional Chinese pagoda with multiple tiers and a dark roof is visible. The pagoda is partially obscured by a white fence in the foreground. The overall scene is set against a blue background.

Thanks for your attention

Questions? Comments?