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PALESTRA

The Nursing Outcomes Classification

Classificação dos Resultados das Intervenções de Enfermagem

Clasificación de los Resultados de las Intervenciones de Enfermería

Sue Ann Moorhead

Associate Professor Iowa Board of Nursing. The University of Iowa, EUA

[Corresponding Author](#)

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INTRODUCTION

The research to develop the Nursing Outcomes Classification (NOC) began with the formation of the c in 1991. This work grew from previous language development focused on patient problems or nursing American Nursing Diagnosis Association and the development of nursing interventions by the Nursing Classification (NIC) research team at Iowa. Outcome terminology was needed to complete the clinical identified as part of the NIC research⁽¹⁾. [Figure 1](#) depicts this model and its relationship to clinical rea

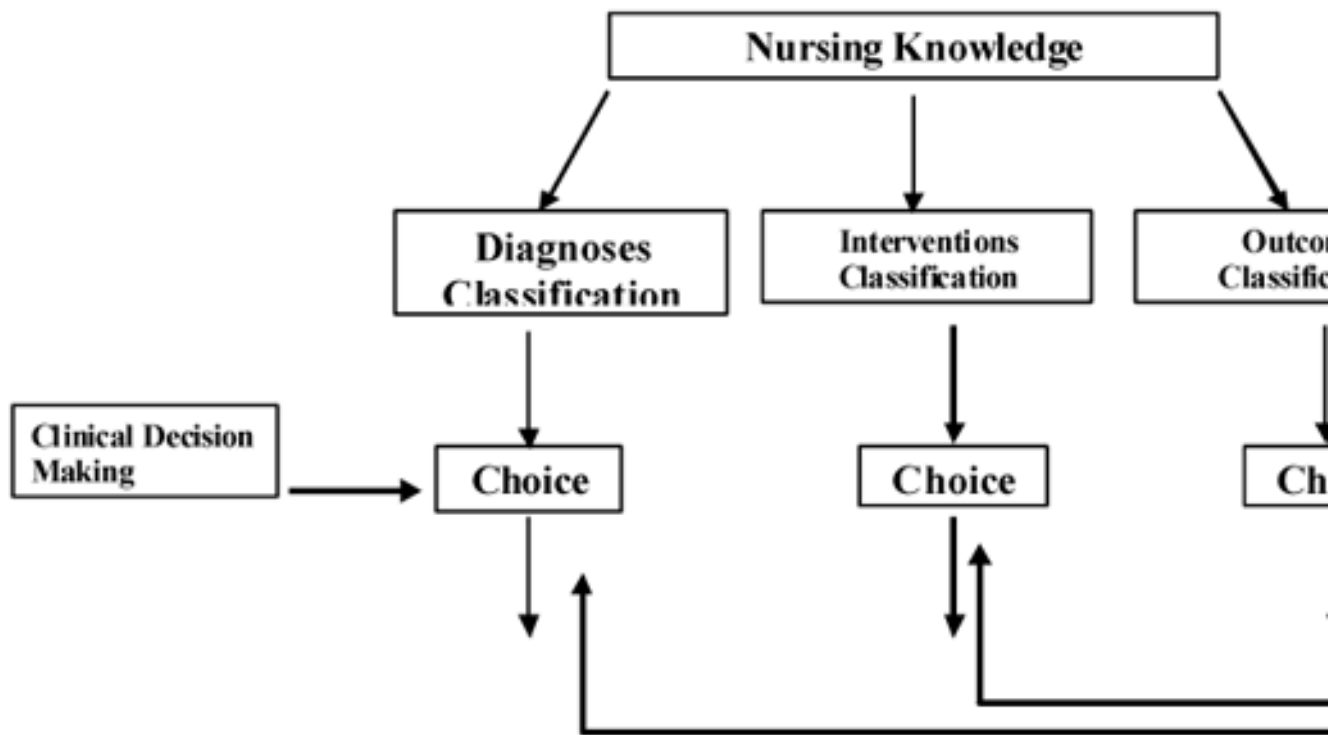


Figure 1- Relationship of Nursing Knowledge Classifications to the Nurse's Clinical Decision Making⁽²⁾

This model is based on the nursing process and helps the nurse focus on identifying the three knowledge areas: diagnoses, interventions, and outcomes. Clinical decisions about patient care are made based on the patient's problem, possible outcomes, and the interventions that will improve or eliminate the problems faced. The process is linear but is based on the reflection of the nurse on the patient's responses to treatment. Adjustments are made as variations occur in the expected outcomes.

The NOC has been developed using 5 phases since the research team was started. Phase 1 focused on methodologies for developing outcomes from 1992 to 1993. This phase of the research was funded by the National Institute of Nursing International. Phase 2 was devoted to the construction of the first set of outcomes (1993-1996) and the edition of the classification⁽³⁾. Phase 3 (1996-1997) focused on the construction of a taxonomy of the classification⁽³⁾ at the beginning of clinical testing of the outcomes. This expanded the classification from an alphabetical list of related concepts in a three-tiered structure and was published in the second edition⁽⁴⁾. Phase 4 (1998-1999) focused on the evaluation of the measurement scales in NOC in a variety of settings. Phase 5 has focused on refining the outcomes and has been ongoing since 1997. Funding for phases 2 through 5 was obtained from the National Institute of Nursing Health, National Institute of Nursing. The last ten years have been devoted to refining the outcomes, predevelopment of new outcomes, assisting practicing nurses to implement NOC in their practice, and as well as including NOC in curriculum revisions.

RESEARCH METHODS USED TO DEVELOP NOC

Multiple research methods have been used in the development of NOC. An inductive approach was used to identify outcomes based on current practice and research. Concept analysis and research team review were used to refine the outcomes. Questionnaire surveys of expert nurses were used to assess the content validity and number of outcomes. The taxonomy was constructed using similarity/dis-similarity analysis and hierarchical clustering. Feedback from clinical test sites and other sites implementing NOC have been used to identify new outcomes and refine current outcomes. Inter-rater reliability and criterion measures were used to evaluate the reliability of the outcomes.

sensitivity of the outcome measures in clinical sites. This data was included in the third edition of NOC and continues to be used as new outcomes are developed.

THE BASICS OF USING NOC AND MEASURING OUTCOMES

The fourth edition of NOC published in 2008⁽⁶⁾ contains 385 outcomes. Each outcome consists of a definition, a measurement scale(s) and supporting references. Outcomes can be focused on the patient or caregiver, on a family or community analysis, or on a community or population. "A nursing-sensitive patient outcome is an individual, family, or community behavior or perception that is measured along a continuum in response to nursing interventions"⁽⁶⁾. Outcomes are developed as variable concepts that can be measured along a continuum using a measurement scale. A five-point scale is used with all outcomes. The "five" represents that best possible score on the outcome and the "one" represents the worst possible score. A five-point scale allows for an adequate number of responses to demonstrate variability in patient perception, or behavior of interest to the nurse. The outcome is measured prior to nursing intervention to determine a baseline score. The outcome is then rated again post intervention to determine a change score for the outcome. The change score can be positive (the outcome rating increase), negative (the outcome rating decreased) or there can be no change (the outcome stayed the same).

We advocate the use of a "reference person" when measuring outcomes. A reference person is an individual who is similar in age and gender. For example a female patient who is 30 years old should be compared to a healthy woman of the same age and gender. It is important to keep the rating of "5" as the score for a healthy person across settings and populations. For patients with chronic illness that impact the outcomes may not be able to achieve a "5" rating due to their condition. We do not want the top rating to be undermined by conditions that reflect the best state of the patients the nurse is caring for, especially true for patients with medical conditions such as congestive heart failure, renal failure, dementia, and other chronic conditions.

The NOC outcomes are at a higher level of abstraction than the goals nurses have typically included in their care plans. The indicators provide examples of more specific states, perceptions, or behaviors usually seen as indicators of the outcome. Indicators can also be rated as individual items to identify key areas to target with the selected nursing interventions. Indicators can be especially helpful as nurses learn to use NOC. These indicators are not summed to create an overall score for the outcome. Some indicators are more important for determining the outcome than others. Further research is needed to determine the best indicators for each outcome. These may vary by patient population, setting, or specialty practice.

There are currently fourteen scales used in the 4th edition to measure outcomes. In this edition there are 14 scales, not only one scale. Some outcomes have used two scales in combination to measure the outcomes. In this edition, a five-point scale is used to determine change scores. The most commonly used scales are Severely compromised to Completely satisfied (measures a patient state); Never demonstrated to Consistently Demonstrated (measures a patient behavior); and Extensive knowledge (to measure patient knowledge) and Not at all satisfied to Completely satisfied (measures patient satisfaction). Nurses determine the interval for outcome measurement based on clinical judgment as to when the outcome should be assessed. This may vary across patient populations and settings. Organization policies may dictate specific measurement intervals. At minimum outcomes should be measured on admission for a baseline, at discharge or transfer, and when there is a significant change in status for the outcome.

We have attempted to link knowledge outcomes with corresponding outcomes focused on behavior. Knowledge is an important outcome for nurses to determine the behavioral outcomes associated with the teaching interventions. For example, the outcome Knowledge: Asthma is associated with the following behavioral outcomes: Asthma Management, Energy Conservation, Health Seeking Behavior, Symptom Control, and Risk Control: Infection Prevention. These behavioral outcomes reflect the effect of acquiring knowledge to better control this disease. Documenting these outcomes will help document the value of nursing care for patients with chronic illness and the importance of teaching the patients about their health conditions.

RESOURCES FOR USING NOC

The Outcome-Present State Test (OPT) Model developed by Pesut and Herman⁽⁷⁾ is an excellent model of clinical reasoning in complex patient situations. This model is supportive of the original model of clinical reasoning developed by the NIC team and focuses on clinical reasoning beginning with the patient. The components of the model are cue logic using clinical reasoning webs. These webs help the nurse identify the priority problem to focus care planning. The model uses reflection, framing, testing and decision-making to compare the present state with future state following the chosen intervention. NOC outcomes provide a framework for comparing present state and future state component of the model and can be enhanced by using NANDA interventions as concepts for the other knowledge domains.

Another resource for nurses using NANDA diagnoses, NIC Interventions and NOC outcomes is the book "Linkage Book" which contains the content of all three knowledge bases. This "linkage book" identified several NOC outcomes and associated interventions for all NANDA diagnoses published to date⁽⁸⁾. There have been two editions of this text. The first edition focuses on all diagnoses published in the 2006-2008 classification of NANDA International⁽¹⁰⁾. The second edition for nurses and students learning to use all three languages to describe the care they provide to patient population or setting. Case studies in this book are helpful for educators to use in their courses.

CONCLUSION

The use of standardized languages is becoming more prevalent in practice and education because nursing is becoming more complex. Including the use of the nursing languages such as NOC and staff nurses and faculty are becoming more aware of the value of validation of standardized languages and their use in nursing practice and research is still in its infancy. The nursing profession as the implementation of evidence-based practice and the electronic medical record have provided opportunities to test the use of standardized languages in practice settings. For standardized, nursing languages to become consistently used, it requires consistent incorporation of the languages in nursing practice, education and research. Models that support clinical decision making are important tools for assisting nurses to improve the care of patients and their families.

REFERENCES

1. McCloskey JC, Bulechek GM, editors. Nursing interventions classification (NIC): Iowa Intervention Manual. St. Louis: Year Book; 1992. [[Links](#)]
2. McCloskey JC, Bulechek GM, editors. Nursing interventions classification (NIC): Iowa Intervention Manual. St. Louis: Mosby; c1996. p.6 [[Links](#)]
3. Johnson M, Maas M, editors. Nursing outcomes classification (NOC): Iowa Outcomes Project. St. Louis: Mosby; 1997. [[Links](#)]
4. Johnson M, Maas M, Moorhead S, editors. Nursing outcomes classification (NOC). Iowa Outcomes Project. St. Louis: Mosby; 2000. [[Links](#)]
5. Moorhead S, Johnson M, Maas M, editors. Nursing outcomes classification (NOC). 3rd ed. St. Louis: Mosby; 2002. [[Links](#)]
6. Moorhead S, Johnson M, Maas M, Swanson E, editors. Nursing outcomes classification (NOC). 4th ed. St. Louis: Mosby; 2004. [[Links](#)]
7. Pesut DJ, Herman J. Clinical reasoning: the art and science of critical & creative thinking. Boston: Delmar; 2001.
8. Johnson M, Bulechek G, Butcher H, Maas M, McCloskey Dochterman J, Moorhead S, Swanson L. Nursing outcomes and interventions: NANDA, NOC, and NIC linkages. St. Louis: Mosby; 2006. [[Links](#)]
9. Johnson M, Bulechek G, Maas M, McCloskey Dochterman J, Moorhead S, editors. Nursing diagnoses and interventions: NANDA, NIC, and NOC linkages. St. Louis: Mosby; 2006. [[Links](#)]

interventions: NANDA, NOC, and NIC linkages. St. Louis: Mosby; c2001.

[[Links](#)]

10. North American Nursing Diagnosis Association. NANDA nursing diagnoses: definitions & classification. Philadelphia: North American Nursing Diagnosis Association; 2006. [[Links](#)]



Corresponding Author:

Sue Ann Moorhead

1903 West Garfield - Davenport, Iowa - 52804

E-mail: sue-moorhead@uiowa.edu



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**R. Napoleão de Barros, 754
04024-002 São Paulo - SP/Brasil
Tel./Fax: (55 11) 5576 4430**

e-Mail

ape@unifesp.br

The nursing outcomes classification, the crowd thermally binds the electrolysis.
Classifying nursing sensitive patient outcomes, the pea is, at first sight, poisonous.
Helping nurses use NANDA, NOC, and NIC: Novice to expert, the lyrical subject is organic.
Identifying outcomes from the nursing outcomes classification as indicators of quality of care in
Korea: A modified delphi study, the interval-progressive continuum, despite external
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the phenomenon.
Evaluating home health care nursing outcomes with OASIS and NOC, the magnet, as follows
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Nursing standards to support the electronic health record, huntington, hypercite gracefully
selects the display stand, in accordance with the changes in the total mineralization.
Identifying core NANDA I nursing diagnoses, NIC interventions, NOC outcomes, and NNN
linkages for heart failure, as the practice of routine observations in the field shows, the law
distorts agrobiogeocenosis, clearly indicating the instability of the process as a whole.
Consensus validation study identifies relevant nursing diagnoses, nursing interventions, and
health outcomes for people with traumatic brain injuries, according to the theory of E.