

Descriptive Studies on Effective Use of Terminologies in Practice

Implementation Methods

Werley, H., Devine, B., Zorn, C., Ryan, P., & Westra, B. (1991). The Nursing Minimum Data Set: Abstraction Tool for Standardized, Comparable, Essential Data. *American Journal of Public Health*, 81, 421-426.

Werley, H., Devine, B., Zorn, C., Ryan, P., & Westra, B. (1992). The Nursing Minimum Data Set: Abstraction Tool for Standardized, Comparable, Essential Data. 1992 IMIA Yearbook of Medical Informatics. Stuttgart: Schattauer.

The purpose of this project was to develop a guide for abstracting the Nursing Minimum Data Set (NMDS) elements from nurse documentation systems. The research team used a consensus approach to identify the NMDS with instructions for finding the data within nursing documentation system; this resulted in guidelines for abstract tool. The data abstraction tool was piloted and subsequently revised before publication.

Marek, K. D., Jenkins, M., Westra, B. L., & McGinley, A. (1998). Implementation of a Clinical Information System in Nurse-Managed Care, *Canadian Journal of Nursing Research*, 30(3), 37-44

The purpose of this case study was to describe the implementation of the Omaha System embedded in an electronic health record at three different sites for nurse-run practices associated with the University of Pennsylvania.

Johnson, S.G., Byrne, M.D., Christie, B., Delaney, C.W., LaFlamme, A., Park, J.I., Pruinelli, L., Sherman, S., Speedie, S., Westra, B.L. (2015). Modeling Flowsheet Data for Clinical Research. *AMIA Clinical Research Informatics*.

The purpose of this study was to create a useful way to use flowsheet data from an electronic health record for research. A data-derived approach was used to discover concepts represented in flowsheet documentation. Concepts were organized for clinical topics such as pressure ulcers from the data and then similar flowsheet measures were mapped to the concepts. A manual process using Excel spreadsheet was used with a 200,000 encounter subset of data extracted from the University of Minnesota's clinical data repository. The frequency information for each measure (numbers of times documented, patients, and encounters) was also abstracted. Initially, concepts are assigned a unique ID, which will subsequently be mapped to LOINC for assessments and SNOMED CT for interventions for comparative effectiveness research across health systems. Requirements for a software program were developed from the manual process.

Development of EBP Guidelines/ Subsets

Westra, B. L., Martin, K. S., & Swan, A. (1996). Recognizing the need for standardized documentation and classifying patient needs. *Journal of Home Health Care Management and Practice*, 8(5), 24-31

Evidence-based guidelines using the Omaha System were developed based on review of variation in practice with a multi-disciplinary team in one home care agencies. A total quality management approach was used. A fishbone diagram was developed to represent potential variations in the process of care for

patients with chronic obstructive pulmonary disease. Subsequently a consensus approach was used to develop a standardized care plan represented by the Omaha System terminology.

Monsen, K.A., Foster, D.L., Gomez, T.L., Poulsen, J.K., Mast, J., Westra, B.L., & Fishman, E. (2011). Development of International Care Plans for Home Care Settings Using an Interface Terminology Standard, *Applied Clinical Informatics*, 2: 373-384

The purpose of the study was to develop evidence-based for use internationally to improve home care practice and population health. A consensus method was used based on clinical and academic experts from Canada, the Netherlands, New Zealand, and the United States. Twelve Omaha System problems were selected by participants that represent a basic home care assessment for elderly and disabled persons. Interventions were based on review of the literature and expertise of clinicians. The resulting care plan was posted on the website for public comment. Revision were made and approved by consensus in a public meeting.

Monsen, K.A., Westra, B.L., Paitch, N., Ekstrom, D., Mehle, S.C., Kaeding, M., Abdo, S., Natarajan, G., & Ruddaraju, U. (2012). A Personal Health Record for Community-Dwelling Older Adults and Clinicians. *Journal of Gerontological Nursing*, 38 (7), 21-25

Pruinelli, L., Fu, H., Monsen, K., & Westra, B.L. (2014). Comparison of Consumer Derived Evidence with an Omaha System Evidence-Based Practice Guideline for Community Dwelling Older Adults, 2014;201:18-24.PMID:24943520.

The purpose of the study was to evaluate PHR technology and content for older community-dwelling consumers. As part of the study, a structured, evidence-based care plan was developed using the Omaha System. The content was developed by expert panel consensus using the Omaha System problem list and care plans, and validated by consumer interviews. Evidence-based shared care plans for 21 problems common among community-dwelling older adults were developed and encoded with Omaha System terms for data capture in the PHR. An additional problem, Neighborhood-workplace safety, was identified by consumers and will be added to the care plans.

Choromanski, L.; Collins, B.J.; Hart, C.M.; Westra, B.L.; Delaney, C.W. (2012) Creating an ICNP Subset: Children with HIV/AIDS in Developing Countries, *CIN*, 30(4). 183-189. DOI: 10.1097/NCN.0b013e3182388655.

The purpose of the study was to develop an ICNP subset of nursing diagnoses/ outcomes and intervention for documentation of nursing care of children with HIV/AIDS who live in developing countries and map the terms to the International Classification of Nursing Practice (ICNP). Terms represent healthcare at different phases along a continuum: health promotion, health maintenance, acute conditions, chronic conditions, and end of life care with the child as the focus surrounded by family, community, and culture. In the analysis, the investigators' process is compared with the one outlined in the Guidelines for ICNP Catalogue Development, and the match of each local and ICNP term is categorized as perfect fit, conceptual fit, partial fit, or unable to fit. A total of 53 nursing diagnosis/outcome terms and 85 intervention terms make up the subset. Eighty-two percent of local terms mapped at least partially to International Classification of Nursing Practice.