

Terminology Development Within in a Nursing Specialty Organization

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ASPAN: Embarking on The Data Element Journey

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The Organization

The American Society of PeriAnesthesia Nurses (ASPAN) is the professional specialty nursing organization representing the interests of more than 55,000 nurses practicing in all phases of preanesthesia and postanesthesia care, ambulatory surgery, and pain management.



Core Purpose

- *To advance the unique specialty of perianesthesia nursing.*





Big Audacious Goal

- ASPAN will be recognized by the healthcare community worldwide as the leading organization for perianesthesia nursing education, practice, standards and research.

Scope of Perianesthesia Nursing Practice

- The Scope of Perianesthesia Nursing Practice involves the assessment for, diagnosis of, intervention for, and evaluation of physical or psychosocial problems or risks for problems that may result from the administration of sedation/analgesia or anesthetic agents and techniques.

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- Our practice is systematic in nature and includes the nursing process, decision-making, analytical and scientific thinking, and inquiry.
 - Most patient outcomes are very specific in a physiological sense

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- Our unique knowledge base regarding sedation/analgesia and anesthetic agents and techniques, the physiological and psychological responses to them, and the vulnerability of the patient subjected to them is coupled with all the principles of age-specific medical-surgical and critical care nursing.

Perianesthesia Levels of Care



Preanesthesia Phase

- Preadmission – The nursing roles in this phase focus on preparing the patient/family/significant other physically, psychologically, socioculturally, and spiritually for his or her experience. Interviewing and assessment techniques are used to identify potential or actual problems that may result. Education and interventions are initiated to optimize positive outcomes.

PreOperative or PreProcedure

- Day of Surgery/Procedure – The nursing roles in this phase focus on validation of existing information and completion of preparation of the patient/family/significant other physically and emotionally for his or her experience.



Postanesthesia Phase I

- The nursing roles in this phase focus on providing postanesthesia nursing care to the patient in the immediate postanesthesia period, transitioning them to Phase II, the in-patient setting, or to an intensive care setting for continued care. Basic life-sustaining needs are of the highest priority. Constant vigilance is required during this phase.

Postanesthesia Phase II

- The nursing roles in this phase focus on preparing the patient/family/significant other for care in the home, Extended Observation, or an extended care environment.





Extended Observation

- Extended Observation (formerly known as Phase III) - The nursing roles in this phase focus on providing ongoing care for those patients requiring extended observation/intervention after discharge from Phase I or Phase II.



Stepping Back....2006-2007

- One focus of ASPAN's journey to excellence is the establishment of Perianesthesia Data Elements (PDE)
- PDE offers standardized and consistent perianesthesia language for nursing diagnoses, assessments, interventions, and care outcomes



...Enthusiasm

...Naiveté

...Lofty Goals




ASPAN Data Elements Strategic Work Team


- August 13-15, 2004, in Nashville, TN
- Core Purpose
 - To create a comprehensive dictionary that includes critical data elements for perianesthesia nursing documentation.




Objectives

- Identify and brainstorm the core categories and settings for clinical documentation (consider nursing process using assessment as the main category, including system review, problem list or nursing diagnosis, etc.)

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- Develop consensus among the Strategic Work Team (SWT) regarding structure and format
 - i.e., decide if outpatient will be different from inpatient; do we need to address adult and/or pediatric?

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- Incorporate current standards and other EBP and expand to meet documentation requirements
 - Obtain consensus within the SWT and validate among perianesthesia nursing experts

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- Pilot and study the feasibility, usability and clarity of the data elements
 - Disseminate findings to our membership and beyond

Original Timeline 8/2004

■ Meeting

- Conceptual model created
- Initial outcomes defined
- Data elements named
- Initial work on template for data element design
- Request additional meeting

Next Steps

- September 2004
 - Minutes, notes collated, edited, distributed
 - Identify meeting time and place
- October/November 2004
 - Email “work” on data elements
- December 2004/January 2005
 - Review by Experts - 2 week turnaround
 - Meeting end of January to refine

Next Steps

- Early February - validation 2-3 weeks;
- Simultaneously start IRB - expedited review; in November - pilot study; have in place by January/February
- Present in April - at Town Meeting - Safety, EBP, Data Elements
- Actual study - Convenience sample
- Legal consultant for copyright, marketing decisions, partnerships, contracts



Next Steps

- Request to BOD, RA, to change SWT to standing committee; go to bylaws for changes
- Meeting at National Conference
- Present to BOD on Saturday
- Town Meeting - open




When everything seems to be going against you, remember that the airplane takes off against the wind, not with it.

Henry Ford



Enlightenment....

Focusing Our Work....



From Perianesthesia Data
Elements
to a
Concept Based Computational
Language

Marisa L. Wilson DNSc., MHSc., RN

The ASPAN PDE Committee has:

- Focused on the perianesthesia nursing domain only
- Developed a dictionary and classification
- Based all development on research and evidence
- Developed the listing of individual data elements and concepts that correspond with the interventions and outcomes
 - Precursor to Decision Support Systems
- Conducted face validity testing
- Validated with pediatric community
- Developed the framework for the perianesthesia end user interface language



What was created?

- Sets of Diagnoses, with attendant Assessments and Interventions
- Resultant outcomes that are very specific
- A dictionary
- A classification

Nursing Diagnoses within PDE

- A nursing classification consisting of:
 - Approximately 30 Nursing Diagnoses, such as:
 - Ineffective Airway Clearance
 - Ineffective Tissue Perfusion
 - Fluid Volume Deficit/Excess
 - Alteration in Body Temperature
 - Knowledge Deficit
 - Altered Comfort
 - Some are within NANDA and some are not

Nursing Assessments within PDE

■ Detailed and Specific

Example: Fluid and Electrolyte

- Vital signs
 - Temperature
 - Heart rate
- Respiratory rate
 - Blood pressure
 - Oxygen saturation
 - Central venous pressure
- Weight
- Orthostatic pressures
- Oral intake
- Intravascular replacement fluid
 - Volume
 - Rate
 - Site of infusion
 - Condition of infusion site
- Venous filling
- Skin turgor
- Mucous membranes
- Assess urine output and characteristics
- Other fluid loss
- Irrigant
- Hematocrit and Hemoglobin
- Mental status
- Electrolytes
 - Metabolic panel
- Edema
- Ascites
- Breath sounds, effort and pattern
- Heart sounds
- Pediatric
 - Head circumference
 - Fontanels

Nursing Interventions within PDE

- Multiple specific interventions related to diagnoses
- Detailed data (elements) presented for each intervention
 - Example – Fluid and Electrolyte
 - Every drain type is listed
 - Detailed description of contents within each drain is listed



The ASPAN Mandate:

- Make PDE suitable for use within computer systems.
 - What is the informatics best practice to accomplish the mandate?
 - What internal organizational structures will need to be developed to sustain this?
 - What external organizations will need to be called upon to grow and sustain this?


Criteria for Terminologies Related to Suitability for Implementation in Computer Systems

- Atomic based – concepts need to be separated into components
- Compositionality – must be able to be combined to form more complex concepts
- Language independence – support for multiple linguistic expression
- Multiple hierarchy – accessible through all reasonable hierarchies
- Nonambiguity – explicit definitions for each term
- Nonredundancy – one preferred way of representing a concept
- Synonymy – support of synonyms

Bakken, S., Cashen, M., S., Mendonca, E. A., & O'Brien, A. (2000). Representing nursing activities within a concept-oriented terminological system: evaluation of a type definition. *Journal of the American Informatics Association.*, (7), 81-90.

Towards a Concept Based Computational Terminology – A Model in Development

- Develop terminology from evidence, research, and consensus
- Validate terminology
- Validate definitional congruence via interdisciplinary work
- Disentangle statements into ICNP 7 Axis Format*
- Reflect terminology into practice guidelines
- Develop Storyboards to illustrate terminology
- Develop Activity Diagrams to illustrate the people, processes, and systems

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- Pull out key glossary terms
 - Develop consensus with other specialty organizations
 - Concept map to SNOMED**
 - Develop Use Case for Vendors to illustrate best practice for terminology in action
 - Research related to usability in computer systems
 - Develop ASPAN-Vendor relations
 - Develop maintenance plan
 - Develop education plan
 - Develop protection plan

Why International Classification of Nursing Practice (ICNP)?*

- ICNP® Definition
- The ICNP® is a unified nursing language system. It is a compositional terminology for nursing practice that facilitates the development of and the cross-mapping among local terms and existing terminologies.
- ICNP® Elements
 - Nursing phenomena (nursing diagnoses)
 - Nursing actions
 - Nursing outcomes

ICNP® Version 1 - The 7 Axis Model

- **Focus:** The area of attention that is relevant to nursing
- **Judgment:** Clinical opinion or determination related to the focus of nursing practice
- **Means:** A manner or method of accomplishing an intervention
- **Action:** An intentional process applied to or performed by a client
- **Time:** The point, period, instance, interval or duration of an occurrence
- **Location:** Anatomical and spatial orientation of a diagnosis or intervention
- **Client:** Subject to which a diagnosis refers and who is the recipient of an intervention

Composing Practice with ICNP

Nursing Diagnoses or Outcomes

Using the ICNP® 7-Axis Model to create nursing diagnoses and nursing outcome statements,

the following guidelines are recommended:

- Must include a term from the **Focus Axis**.

- Must include a term from the **Judgment Axis**.

- May include additional terms as needed from Focus, Judgment or other axes.

Nursing Interventions

Using the ICNP® 7-Axis model to create nursing intervention statements, the following guidelines are recommended:

- Must include a term from the **Action Axis**.

- Must include at least one **Target** term.

- A Target term can be a term from any axis except the Judgment Axis.

- May include additional terms as needed from Action or any other axis.

Why SNOMED CT? **

- The primary goal is to advance “patient care through the delivery of a dynamic and sustainable, scientifically validated terminology and infrastructure that enables clinicians, researchers and patients to share health care knowledge worldwide, across clinical specialties and sites of care.”
- It is an international health care terminology that makes health care knowledge usable and accessible wherever and whenever it is needed – transitioning to IHTSDO
- The value of **SNOMED CT** for nursing is recognized by the American Nurses Association (ANA) and by the Consolidated Healthcare Initiative (CHI) of the US Government.
- <http://www.snomed.org/clinical/nursing.html>



Business Plan Development

- Critical to success of PDE
- Relates to licensing, distribution, education
- Relates to interactions with other specialty organizations
- Relates to interactions and research with vendors
- Legal part of the PDE development
- Must be completed to continue the progress of the committee



Research Plan Development

- Continue to hone Evidence Based derivation of concepts
- Test this process as a model for other specialty organizations
- Develop research opportunities with vendors, health care institutions, and other academics to test the model.

Questions?

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