

ICNP[®] Version 2

***INTERNATIONAL
CLASSIFICATION FOR
NURSING PRACTICE***

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Acknowledgements

The launch of the International Classification for Nursing Practice (ICNP®) Version 2 at the International Council of Nurses (ICN) 24th Quadrennial Congress in Durban, South Africa, represents the work of countless nurses and other experts over the past 20 years. Nurses worldwide contributed to the development of ICNP® even before its formal inception and the resolution to develop an international classification for nursing approved by the Council of National Representatives at the ICN 19th Quadrennial Congress in Seoul, Korea in 1989.

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We recognize over 140 nurses and their interdisciplinary colleagues from over 40 countries who have contributed to ICNP® research and development projects. We note that more than 165 ICNP® articles related to ICNP® have been published to date.

Finally, we recognize ICN staff including Amy Coenen (Programme Director); Claudia Bartz (Programme Coordinator); Amy Amherdt (Administrative Assistant); and Nicholas Hardiker (Research Coordinator); and Kay Jansen and Tae Youn Kim (Terminology Managers).

Foreword

The launch of Version 2 of the International Classification for Nursing Practice (ICNP®) 20 years following the initial approval of its development was a landmark event for the International Council of Nurses (ICN). The launch took place during ICN's Quadrennial Congress in Durban South Africa, where thousands of nurses came together to listen, learn and share information and knowledge to address the challenges of health care worldwide.

The International Council of Nurses (ICN) has expanded its membership and the comprehensiveness of its programmes over the past 20 years. So also has ICNP® grown from a set of nursing concepts (alpha, beta and beta 2 versions) to a terminology that reflects and represents nursing practice and can be used for documentation of nursing diagnoses, nursing interventions, and client outcomes. Since Version 1.0 ICN has used state of the science software to ensure robustness of the terminology.

ICNP® supports the ICN mission of advancing nursing and health worldwide by providing a unified nursing language for documentation at the point of care. Acceptance and use of ICNP® have become more widespread. In 2008, the World Health Organization (WHO) recognised ICNP® as a member (a related classification) of the WHO Family of International Classifications, recognising that a terminology for the nursing domain is essential for health care documentation.

As implementation of ICNP® continues to expand in countries and regions, data-based nursing knowledge will guide nursing interventions for optimal client outcomes, support decisions for health care resource management, and shape nursing and health care policy.

David C. Benton
Chief Executive Officer
International Council of Nurses

CHAPTER 1 – ICNP® HISTORY

Background for the ICNP®

Nursing leaders including Florence Nightingale (1859), Isabel Hampton Robb (1909), Norma Lang and June Clark (1992) noted through the years that a clear articulation of nursing practice is essential for full recognition of the broad and diverse domain of nursing (ICN 2005). Critical to the articulation of nursing practice is a terminology that uses state of the science technology for maintenance and development and that involves worldwide participation in research and clinical application. These are now key features of the ICNP® Programme.

The proposal to ICN in 1989 for development of an international classification set out the following criteria (ICN 1995, p.16) which continue to be relevant today. ICNP® must be:

- broad enough to serve the multiple purposes required by different countries;
- simple enough to be seen by the ordinary practitioner of nursing as a meaningful description of practice and a useful means of structuring practice;
- consistent with clearly defined conceptual frameworks but not dependent upon a particular theoretical framework or model of nursing;
- based on a central core to which additions can be made through a continuing process of development and refinement;
- sensitive to cultural variability;
- reflective of the common value system of nursing across the world as expressed in the ICN *Code for Nurses*; and
- usable in a complementary or integrated way with the family of classifications developed within WHO, the core of which is the International Classification of Diseases (ICD).

As we approach the end of the first decade of the 21st century, the world continues to experience political, social and economic challenges that influence health care delivery, from the most advanced system to the least resourced point of care. Nurses know that their expertise is needed at every level of health care. However, in many areas of the world, accurate data about nursing resources and nursing care delivery are not sufficient to support evidence-based practice, management or policy development.

Information and communications technologies (ICT) have become a major force in the aim to improve health care access, cost and quality. ICT supports the systematic documentation of care and allows data about health care services, resources and client outcomes to be held in repositories that can be accessed and analyzed to evaluate health care and generate new knowledge. ICT can also facilitate nurses' access to data and evidence.

ICNP[®] makes a significant contribution to the acquisition of data about health care delivery. As a standardised terminology, ICNP[®] can generate reliable and valid data about the work of nursing. As a unifying framework, ICNP[®] can also map with other terminologies to expand data sets for retrieval and analysis. Patient or client care outcomes can be examined in relation to nursing diagnoses and nursing interventions so that what nurses do and what makes a difference in patient or client outcomes can be quantitatively evaluated and compared across points of care worldwide.

With the use of ICNP[®] in a core data set, an array of systematically collected data can be generated for analysis of care environment, nursing resources, nursing care and client outcomes. The concept of core data sets has emerged from the nursing minimum data set literature (Goossen, Delaney, Coenen et al. 2006; MacNeela, Scott, Treacy & Hyde 2006) and research in other disciplines (Bull 2009; CHRR 2005; Shaw 2005). As data collection methods reflecting the whole context of care are refined and implemented, nurses can determine benchmarks for safe and effective care delivery at any level, from one local setting to international systems.

Representations of ICNP[®]

Alpha Version (1995)

The initial alpha version of ICNP[®] was organised into three components: human needs, what nurses do, and outcomes. Human needs included nursing problems, patient problems, nursing factors and nursing phenomena. What nurses do included nursing interventions, actions and treatments. Outcomes included nursing outcomes and nursing-sensitive patient outcomes.

The relationship between nursing terms, vocabulary, classification and data set demonstrated the innovation and forward thinking of the developers who prepared the alpha version (Figure 1). In addition to facilitating documentation of nursing practice, it was envisaged that ICNP[®] would be an information tool in health information systems (Figure 2).

The alpha version of ICNP[®] comprised nursing phenomena and nursing interventions. Nursing phenomena, arranged as a hierarchy, included the human being (functions and person) and the environment (human and nature). Nursing interventions were organised along multiple axes: action types, objects, approaches, means, body sites and time/place. The developers noted that nursing outcomes would be included with the next versions of ICNP[®].

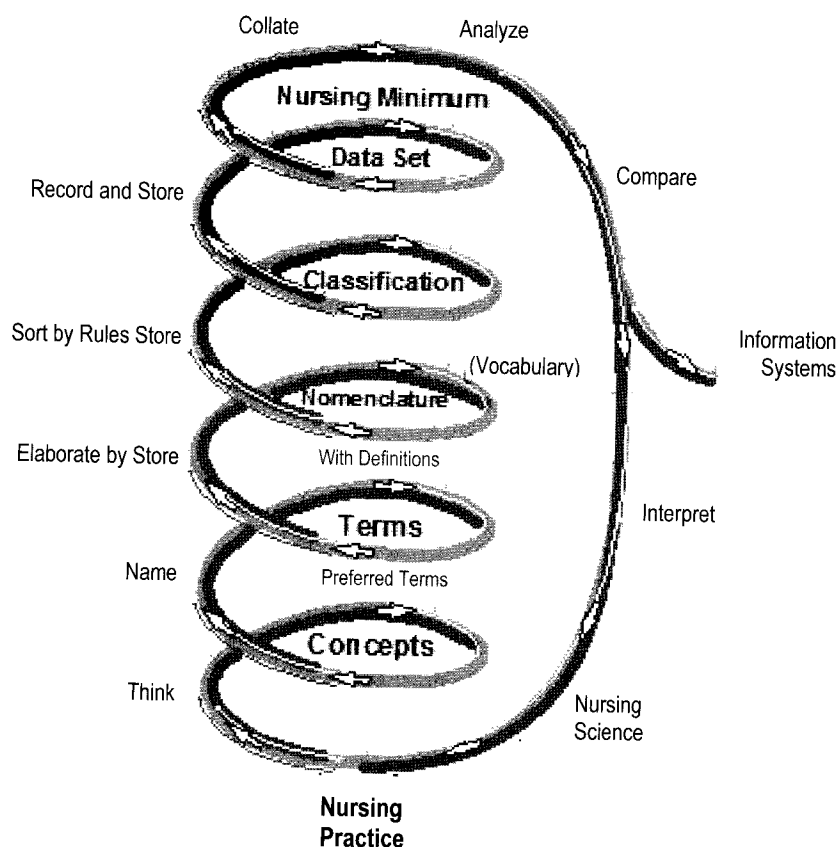


Figure 1. Relationships among terms, vocabulary, classification and data sets

Beta and Beta 2 Versions (1999, 2001)

The beta versions expanded on the use of a multi-axial approach. Two multi-axial models were proposed: an 8-axis model for nursing phenomena and a different 8-axis model for nursing actions.

The eight axes for the nursing phenomena classification in the beta 2 version were: focus of nursing practice, judgement, frequency, duration, topology, body site, likelihood, and bearer. The eight axes for the nursing actions classification were: action type, target, means, time, topology, location, routes, and beneficiary.

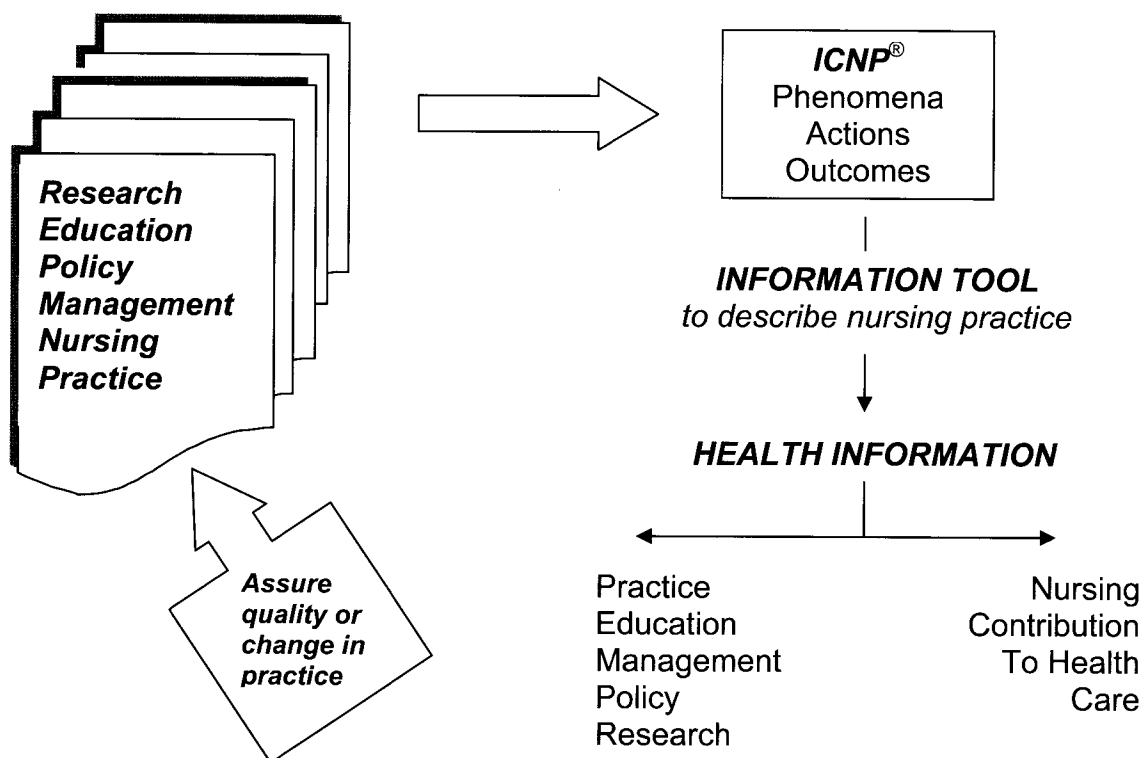


Figure 2. ICNP®: An Information Tool

Definitions for nursing diagnosis, outcome and action were developed, as were guidelines for composing a nursing diagnosis, nursing outcome and nursing intervention using the multi-axial models. Key definitions for ICNP® beta 2 were as follows:

- Nursing phenomenon: aspect of health of relevance to nursing practice.
 - Nursing diagnosis: label given by a nurse to the decision about a phenomenon which is the focus of nursing interventions. A nursing diagnosis is composed of concepts contained in the Classification of Phenomenon axes.
- Nursing outcome: the measure or status of a nursing diagnosis at points of time after a nursing intervention.
- Nursing action: behaviour of nurses in practice.
 - Nursing intervention: action taken in response to a nursing diagnosis in order to produce a nursing outcome. A nursing intervention is composed of concepts contained in the Classification of Action axes.

While 'nursing phenomenon' was defined in the beta versions, the transition from the label 'phenomenon' to the label 'diagnosis' was made during development of the beta versions. Similarly, nursing action was defined but there was a transition from the label 'action' to the label 'intervention' in the beta versions.

In addition to recognizing the potential of using a classification system within electronic health information systems, the developers were coming to recognize that a classification system should use state of the science software methods for maintaining the classification and should also continue to evolve with accepted standards for terminology development.

Version 1.0 (2005)

After consultation with terminology experts, the ICNP® Strategic Advisory Group (SAG) determined that ICNP® should transition from a classification to a formal terminology. Since the terminology was increasing in size and complexity, new tools were required for its management. Version 1.0 was developed using a representation language with formal modeling rules (Web Ontology Language (OWL)). This allowed automated reasoning to be applied to the terminology to ensure consistency and accuracy of concepts.

In addition, the ICNP® SAG confirmed the importance of current international standards for terminologies and the need for ICNP® both to inform international standards and conform to them. The International Organisation for Standardisation (ISO) Technical Specification 17117 stipulated structural attributes for terminologies that ICNP® developers were determined to follow (ISO 2002). The structural attributes included concept-orientation, non-redundancy, non-ambiguity, non-vagueness and internal consistency. The terminology would need to have context-free and unique identifiers, concept descriptions and established processes for version control (Chute, Cohn & Campbell 1998; Cimino 1998; Hardiker & Coenen 2007).

ICNP® 7-Axis Model

The development of Version 1.0 allowed a transition from the two 8-axis classifications of beta 2 to one 7-axis model. The new structure greatly simplified the representation and it resolved to a large extent the redundancy and ambiguity inherent in beta 2 (ICN 2005).

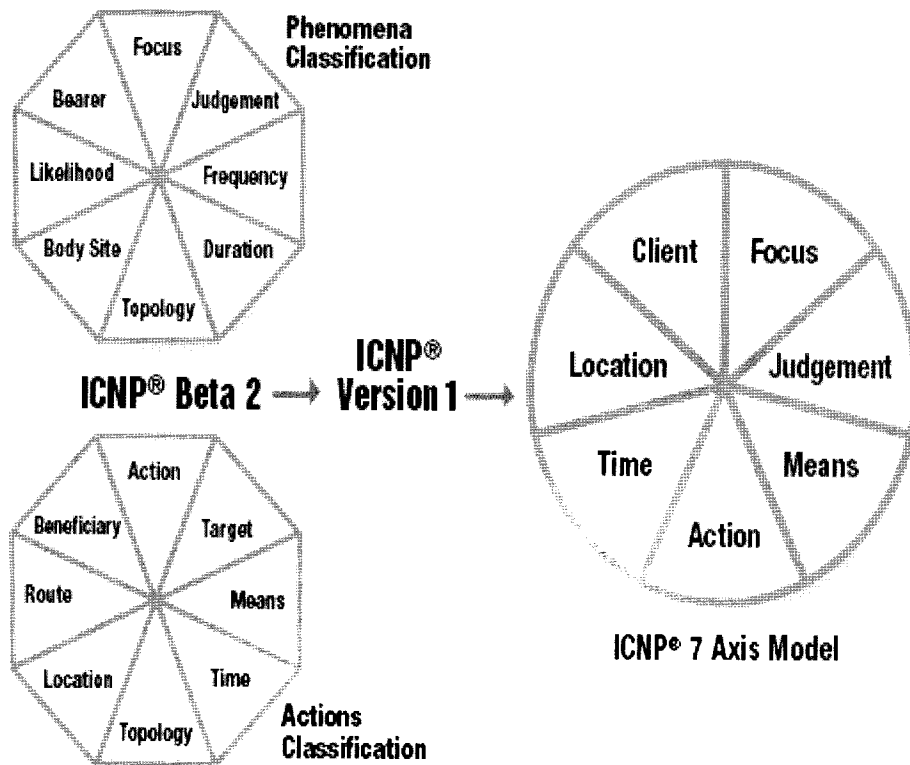


Figure 3. From ICNP® Beta 2 to the ICNP® 7-Axis Model

The axes are defined as follows:

- **Focus:** The area of attention that is relevant to nursing (examples: pain, homelessness, elimination, life expectancy or knowledge).
- **Judgement:** Clinical opinion or determination related to the focus of nursing practice (examples: decreasing level, risk, enhanced, interrupted or abnormal).
- **Client:** Subject to which a diagnosis refers and who is the recipient of an intervention (examples: newborn, caregiver, family or community).
- **Action:** An intentional process applied to a client (examples: educating, changing, administering or monitoring).
- **Means:** A manner or method of accomplishing an intervention (examples: bandage or bladder-training technique).
- **Location:** Anatomical and spatial orientation of a diagnosis or interventions (examples: posterior, abdomen, school or community health center).
- **Time:** The point, period, instance, interval or duration of an occurrence (examples: admission, child birth or chronic).

Although a formal terminology was the foundation of Version 1.0, multiple representations, including the 7-axis model and ICNP® catalogues were maintained for users.

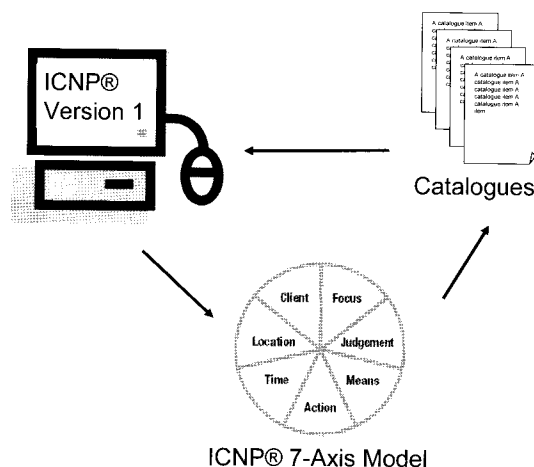


Figure 4. ICNP® Version 1.0, 7-Axis Model, and Catalogues

ICNP® developers recognized that nurses using the classification at the point of care needed more easily used resources for clinically relevant, applicable diagnoses, interventions and client outcomes. ICNP® catalogues were envisioned as subsets of the classification that would focus on specialty, setting, client health condition (e.g. diabetes) or client care phenomena sensitive to nursing interventions (e.g. adherence).

ICNP® Version 1.1

Version 1.1 was released in mid-2008 and included new concepts; a new, more user-friendly browser; and the first catalogue of ICNP® pre-coordinated statements. Three hundred and seventy-six new concepts were added to this version.

Concept Submission and Review

The ICNP® Concept Submission and Review process, updated as Version 1.1, was released, with the aim of making the process more efficient. Nurses and others who identify concepts for submission, modification or inactivation can submit their recommendations on line. Expert nurses are asked to review these submissions and provide their findings to ICN for final disposition (Figure 5).

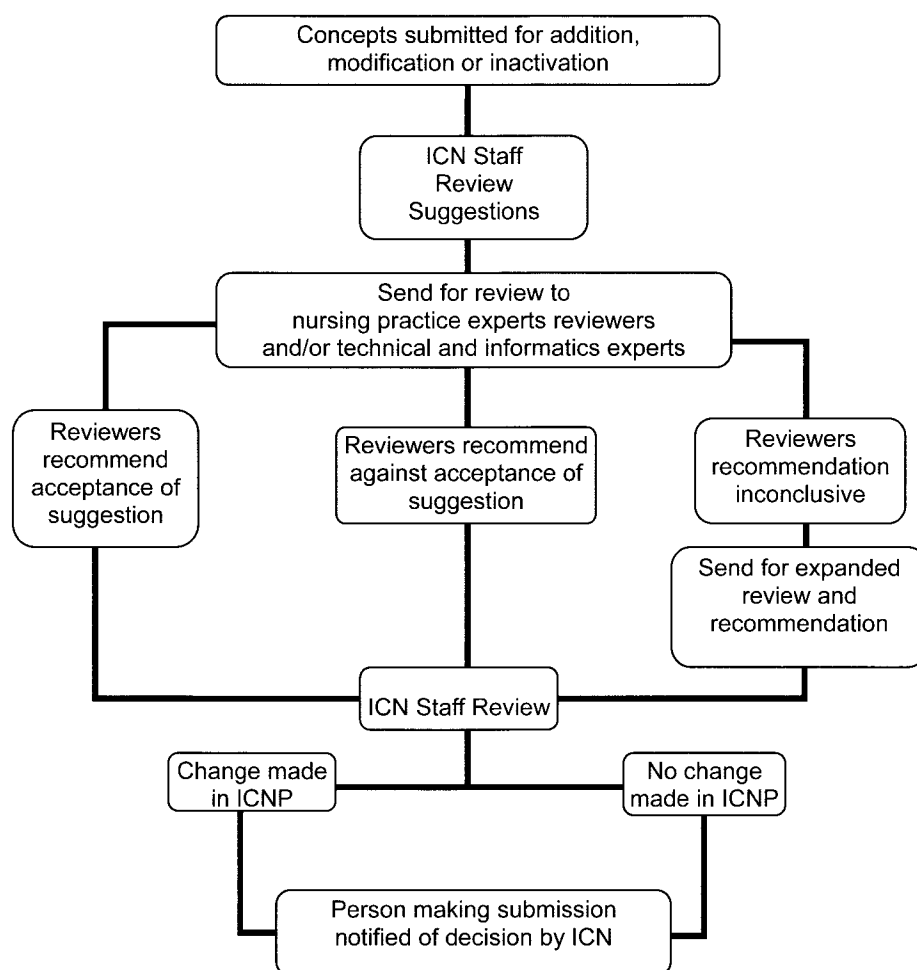


Figure 5. ICNP® Concept Submission & Review Process Model

ICNP® Timeline 2006 to 2009

The following timeline highlights major ICNP® events between 2006 and 2009. For more historical information see Appendix C, ICNP® Timeline for 1989-2005.

2006 Published revised ICNP® Programme Vision and Strategic Goals

ICNP® presentation, workshop, tutorial and exhibit made at NI2006 Conference in Seoul, Korea

NI2006 post-conference, Seoul, Korea

Approved Centre for ICNP® Research and Development at the University of Wisconsin Milwaukee College of Nursing, Wisconsin, USA

- 2007 Second ICN-Accredited ICNP® Research & Development Centres Consortium meeting at the ICN Conference in Yokohama, Japan (German Speaking Users Group; Canberra, Australia; Concepcion, Chile; Milwaukee, USA)

Approved Centre for ICNP® Research and Development of the Federal University of Paraiba, Post-Graduate Program in Nursing, Paraiba, Brasil

Approved Centre for ICNP® Research and Development at the University of Minnesota School of Nursing, Minnesota, USA

Presentations at ACENDIO Conference, Amsterdam, Netherlands

Presentations at 4th International and 11th National Nursing Research Conference, Ankara, Turkey

Presentation at 18th International Nursing Research Congress Focusing on Evidence-Based Practice, Vienna, Austria

Poster at MedInfo 2007 Conference, Brisbane, Australia

Chapter (A Portuguese Experience with ICNP®) in S M Weinstein, AMT Brooks (Eds.), *Nursing without Borders Values Wisdom Success Markers* (pp.208-213). Indianapolis, Indiana: Sigma Theta Tau International

- 2008 ICNP® Version 1.1 released with new Browser

On-line Use Agreement added to ICNP® Version 1.1 Browser

ICNP® accepted as a related classification in the WHO Family of International Classifications

ICNP® added to the U.S. National Library of Medicine Unified Medical Language System (UMLS)

Concept Submission and Review Process revised for use online.

ICNP® Translation Guidelines published

Guidelines for ICNP® Catalogue Development published

First ICNP® Catalogue (*Partnering with Patients and Families to Promote Adherence to Treatment*) published

ICNP® Technical Advisory Group established

Presentations at National ICNP® Conference, Lillestrom, Norway

Presentation at Oncology Nursing Society, Philadelphia, Pennsylvania

Presentation at University of Maryland Summer Institute for Nursing Informatics, Baltimore, Maryland, USA

Presentation at American Academy of Nursing, Phoenix, Arizona, USA

2009 ICNP® Version 2 launched at 24th Quadrennial ICN Congress, Durban, South Africa

Third ICN-Accredited ICNP® Research & Development Centres Consortium meeting, Durban, South Africa

ICNP® Catalogue (*Palliative Care for Dignified Dying*) published

CHAPTER 2 – ICNP® Programme

The ICNP® Programme is organised in three major work areas, all intended to support the vision of ICNP® as an integral part of the global information infrastructure informing health care practice and policy to improve patient care worldwide: (Figure 6).

Research and development projects are initiated by ICN and by nurse and other experts worldwide. Terminology maintenance and operations is, for the most part, a set of processes internal to ICN. Dissemination and education encompass internal and external strategies and are directed at audiences worldwide.

The ICNP® Strategic Advisory Group makes recommendations to the ICN CEO in keeping with the Programme's vision and strategic goals. The ICNP® Technical Advisory Group is charged with determining strategies that ensure the terminology is a dynamic reflection of the state of the science.

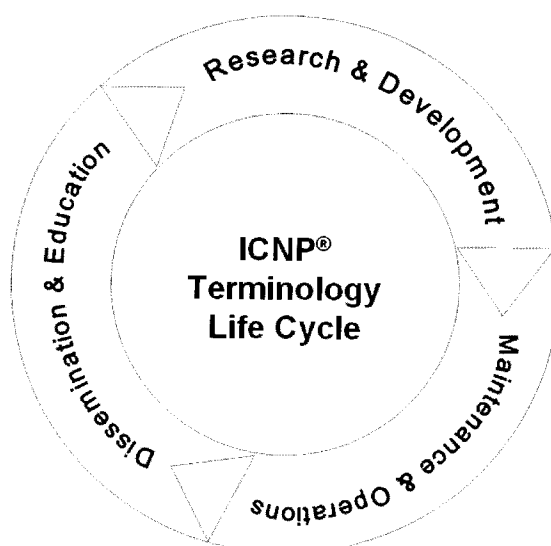


Figure 6. ICNP® Terminology Life Cycle

ICNP® Research & Development

The ICNP® Programme includes a major component of research and development. Many individual researchers contribute to the ongoing testing and evaluation of ICNP®. In addition, ICN has established ICNP® Research and Development Centres.

ICN-Accredited ICNP® Research and Development Centres

An ICN Centre is an institution, faculty, department, national association, or other group that meets ICN criteria and has been designated by ICN as a Centre for Research and Development. ICN designates a centre after an application has been received and reviewed.

ICNP® Centre applications are evaluated according to the following criteria:

1. The Centre's mission (or mandate) is compatible with the ICN mission and the ICNP® Vision.
2. The Centre's goals clearly specify the group's area(s) of ICNP® development and contribution to:
 - research and evaluation including, but not limited to, use of ICNP®;
 - education including serving as a resource for ICNP® information and updates provided by ICN;
 - communication and dissemination of ICNP® including, but not limited to, presentations and publications related to the Centre's work with ICNP®.
3. The Centre's goals are relevant to the ICNP® strategic goals.
4. The Centre has the capacity to achieve its goals.
5. There is evidence of commitment to participation in the ICNP® Centres Consortium, including clear plans for attendance at the consortium meetings.
6. There is evidence of commitment to link with relevant ICN member national nurses associations, including clear plans for regular communications with the association(s).

ICN Centres with similar research areas are organised into a consortium. The concept of a Consortium of Centres fits well within ICN's values of inclusiveness, partnership, flexibility, excellence and visionary leadership.

Nurses around the world are actively scrutinizing ICNP® with the objective of making it dynamic and relevant, today and in the future. ICN wants to acknowledge and work with groups of nurses and other experts to both concentrate and disseminate new thinking and promote new discussion to advance ICNP®. Each Centre identifies the specific aspects of their work (e.g. translation or validation of ICNP®, ICNP® applications in the practice setting) as part of the application process.

Advantages of being an ICN-Accredited Centre

The advantages of being an ICN-Accredited Centre for ICNP® Research and Development include international recognition and opportunities for collaboration through participation in the ICNP® Centres Consortium. Following ICN guidelines, Centres may use the designation "ICN-Accredited ICNP® Research & Development Centre" on letterhead and other communication tools.

Members of the ICNP® Centres Consortium will be invited to use the ICNP® Bulletin to publish activities and news. Centres will also be invited to a Centres Consortium meeting, held every two years in conjunction with ICN Congresses and Conferences. The Centres will be called on from time to time to provide specific advice on programme issues. Their input will be sought with respect to issues, trends and strategies for ICNP® development, dissemination and marketing.

Obligations of an ICN-Accredited ICNP® Centre

ICN reserves the option of designating ICN Centres based on their applications and on ICN priorities and organisational goals. Applicants prepare a four-year plan for approval by ICN, outlining their goals, objectives, activities, timelines, responsible personnel, outcomes and resources. Following accreditation, each Centre submits a self-study report every three years, which includes a review of the Centre's work plan with progress on goals and objectives. At the time of the self-study, the Centre also

submits an updated work plan for the upcoming four years. ICN encourages the participation of its ICN member National Nurses Associations (NNA) in the Centre's activities. When relevant nursing associations are not direct participants of an ICN Centre, Centres are expected to communicate with the NNA on a regular basis.

Each year, one issue of the ICNP® Bulletin includes a short article submitted by each Centre, providing an update on recent activities and outcomes. Centres also agree to have member(s) attend and participate in the ICNP® Centres Consortium, held every two years in conjunction with the ICN Congress/Conference.

ICNP® Catalogues

ICNP® catalogues fill a practical need in building health information systems by describing nursing diagnoses, outcomes and interventions appropriate for particular areas of care (ICN 2008a). ICNP® catalogues provide subsets of ICNP® to nurses working with clients for selected health priorities. ICN welcomes worldwide participation in ICNP® catalogue development and encourages nurses in clinical care areas or specialty organisations to complete a Use Agreement and work with ICN to develop and test catalogues for worldwide validation, and disseminate these catalogues for nurses globally.

In 2008, "Guidelines for ICNP® Catalogue Development" were made available for use worldwide (ICN 2008a). The Guidelines describe a catalogue framework (Figure 7) and show how ICNP® diagnosis, intervention and outcome statements are compliant with the ISO18104:2003 Nursing Reference Terminology Model (ISO 2003). To begin catalogue development, a health priority is selected by nurses with knowledge of the health care needs of clients. Catalogues can address health conditions or medical diagnoses (e.g. diabetes), specialities or settings (e.g. community nursing), or client outcomes sensitive to nursing interventions (e.g. adherence).

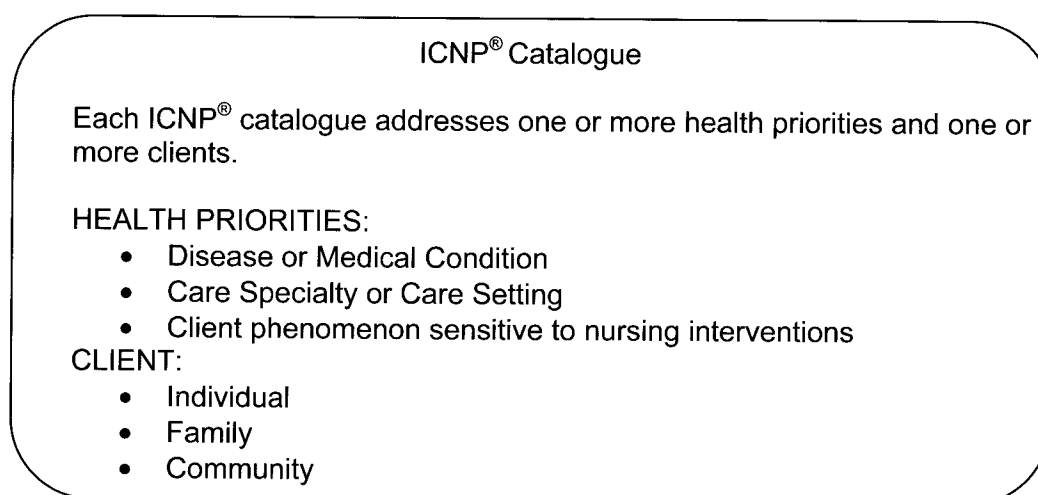


Table 1. ICNP® Catalogue Framework

ICN works to assist groups working in similar areas to collaborate and network for the development of catalogues. Catalogues published by ICN include "Partnering with Individuals and Families to Promote Adherence to Treatment" (ICN 2008b) and "Palliative Care for Dignified Dying" (ICN 2009).

ICNP® Translations

As of March 2009, translations of current versions from the original ICNP® source language of English were completed in Arabic, German, Japanese, Korean, Norwegian, Polish, Portuguese and Spanish. Translations in Farsi (Persian), French, Greek, Indonesian, Italian, Mandarin, Thai and Turkish are in process. Translation of ICNP® is a considerable undertaking; some translations have involved nurses and other experts from multiple countries.

The German Speaking User Group ICNP® Research and Development Centre developed the Browser and Translation (BaT) tool to provide an interactive platform for translation. The BaT allows groups of people to work simultaneously on the translation of ICNP® to their language with structured means for comment, editing and final decisions.

ICN published "Translation Guidelines for International Classification for Nursing Practice (ICNP®)" in 2008 (ICN 2008c). The Guidelines provide conceptual information about translation, methods of translation and cross-cultural equivalence. This content is followed by more specific guidelines/directions for translation which are designed to support nurses and others who translate ICNP®.

When a translation project is being considered, ICN should be contacted so that permission to translate ICNP® can be granted and a Translation Agreement can be signed. The respective National Nurses Association(s) (NNAs) are informed of the intent to translate ICNP® in their countries. Translators are strongly encouraged to keep the NNA up to date on the progress of the work.

Worldwide Research and Development Projects with ICNP®

An extensive listing of research and development projects involving ICNP® can be found on the ICNP® website. The list is updated regularly; new projects are added as Use Agreements are signed and on-going projects are periodically reviewed for closure when a final abstract is received from the project director. Nurses and others from more than 38 countries are represented on the list. More than 140 projects are broadly categorized into terminology studies, development, health information systems, and integration and harmonisation.

Terminology studies include concept validation, ontology analysis and applications in practice settings. Early ICNP® development work can be seen in the projects funded by the W.K. Kellogg Foundation in countries in Africa and Latin America. As ICNP® continues to be studied and implemented worldwide, the need for validation of concepts across practice settings, languages and cultures becomes more important.

Development studies include catalogue development, translations, browsers and applications in education. Health information systems studies include electronic health record applications and computer-user interface research. Integration and harmonization studies include work on minimum data sets and mapping. ICNP® has been mapped with nursing languages and other health care terminologies and work in this area continues. Version 1.1 was the first ICNP® version to be mapped with the U.S. National Library of Medicine Unified Medical Language System (UMLS), a set of many controlled vocabularies in the biomedical sciences. As part of ICN's participation in the WHO Family of International Classifications, mapping is underway between ICNP® and the International Classification of Functioning, Disability and Health.

ICNP® Maintenance and Operations

The maintenance and ongoing updating of ICNP® are critically important to ensuring that the terminology represents the nursing domain reliably, accurately and in a timely manner. Terminology development is a dynamic process, always requiring attention to best practices for content analysis and process improvement. Maintenance policies, quality improvement methods, and conformance with related international standards are necessary to support successful terminology implementation worldwide.

ICNP® maintenance and development procedures support and guide version management of the terminology. Two important principles influence both the way that changes are made in the terminology and the pace and extent of change from version to version. The first principle is that the meaning of an ICNP® entity should not change, that is, there should be concept permanence (Cimino 1998) to ensure the integrity of data over time. Second, ICNP® should change incrementally, that is, with so-called graceful evolution (Cimino 1998) to limit the impact of updates on users.

ICNP® is released every two years, to coincide with the ICN Congress or Conference. The release is via ICN web resources, with use of other media considered as needed. With a predictable release schedule, ICNP® users can build version management into their own work programmes.

ICNP® Dissemination and Education

To meet the goals of ICNP®, the terminology must be available to and understood by multiple users.

Dissemination

Publications for ICNP® that are internal to ICN include a biannual ICNP® Bulletin, guidelines, catalogues, countdowns, press releases, and other time-sensitive material. Guidelines for ICNP® Catalogue Development (ICN 2008a), Guidelines for ICNP® Translation (ICN 2008c), and two catalogues (ICN 2008b; ICN 2009) are available for researchers, educators, vendors, and nurses in practice settings. Three 'Countdowns' were published in advance of the release of ICNP® Version 2 and made available on the website and in the ICN monthly mail to National Nurses Associations.

External publications, both invited and submitted, are key aspects of communication and marketing for ICNP®. Publications external to ICN include book chapters, journal manuscripts, conference proceedings, and news items for nursing and health-related media outlets.

The ICNP® pages on the ICN website provide a constantly updated source of information about ICNP®. In addition to providing access to the collaboration space and the current version's browser, the site describes ICN-Accredited ICNP® Research and Development Centres, ICNP® catalogues, translation guidance and access to the Browser and Translation (BaT) tool, research and development projects, research bibliography, ICNP® Concept Submission and Review Guidelines, and an array of resources that will be helpful to anyone interested in ICNP®, e.g. ICN Fact Sheets and the ICN Bookshop.

ICN Congresses and Conferences are an important venue for dissemination of information about ICNP®. In addition to symposia, workshops and briefings, the ICN-Accredited ICNP® Research and Development Centres Consortium meeting serves to bring people together every two years who otherwise communicate using distance technologies.

The ICNP® Programme constantly encourages nurse expert groups to consider applying to become an ICN-Accredited Centre. The guidance for application is on the ICNP® web pages. Centres provide a focused effort for the development and implementation of ICNP®. In addition, the Programme encourages nurses at conferences, in email communications, and via other modalities to consider carrying out a research or development project using ICNP®. These projects, representing worldwide participation, are essential for the terminology's growth, development and implementation in practice settings.

Education

ICNP® education takes place through consultations, partnerships, workspace collaborations, and conferences. Consultations include mapping projects, translation projects and catalogue development. ICN asks nurses or other experts who work with ICNP® to read and sign a Use Agreement. The responsibilities and expectations of the user are detailed in the agreement. Three broad areas of ICNP® use are noncommercial, commercial and translation. The ICN member NNA is kept informed of work in their country through the Use Agreement process.

With the release of ICNP® Version 2, a web-based ICNP® collaborative space has been developed to encourage and allow nurses and other experts to have input into the development of new concepts and catalogue statements (see Chapter 3). The workspace represents ICN's continuing commitment to involving as many experts as possible in ICNP® development for representation of the nursing domain. It will also serve to educate nurses developing ICNP® catalogues and recommending new ICNP® concepts in that they will receive more timely feedback on their input as content is considered, accepted, and coded for use in the terminology.

The ICNP® Programme partners as widely as possible with organisations to continue advancement of ICNP® as well as other terminology-related standards and products. Partnerships include professional nursing organisations, specialty nursing organisations, health ministries and governments, academic institutions, terminology developers, standards development organisations, vendors, and multidisciplinary organisations such as the World Health Organization. Through these partnerships, ICN seeks to inform people about nursing terminology development and implementation and to be involved in the development, testing, implementation, and evaluation of standards and products related to terminology in health care.

CHAPTER 3 – ICNP® Version 2

More than 400 new entities were added to ICNP® Version 2. Many of the concepts were diagnosis and intervention statements developed for ICNP® catalogues. Other concepts were added to support mapping processes and in response to recommendations from users.

Distribution Formats for ICNP® Version 2

There are multiple representations of ICNP® Version 2, i.e. OWL representation, 7-Axis Model, ICNP® catalogues, each developed and distributed according to the ICNP® maintenance and distribution procedures.

All of the delivery formats for ICNP® are derived from a single formal OWL representation (in which ICNP® is developed) and are distributed via ICN Internet resources. Since the release of ICNP® Version 1.1 there has been an increased emphasis on ICNP® Catalogues. Catalogues may be distributed in a number of formats, including printed booklets and as electronic files.

ICNP® C-Space

A new web based collaborative ICNP® workspace, ICNP® C-Space, will be available with the release of Version 2. C-Space will provide a tool set for ICNP® development and distribution. C-Space will be used initially for ICNP® Catalogue and mapping projects. The workspace will allow project teams to control access to their work and specify the rules for their projects.

The workspace will be extended to support the ICNP® concept review and validation processes. In the future, ICNP® users and researchers will be able to submit recommendations to the ICNP® Programme for addition, modification, or inactivation of concepts or their descriptions. In addition, the ICNP® Programme team will use the site to conduct cross-cultural validation studies. See <http://icnp.clinicaltemplates.org/> to explore the ICNP® C-Space.

Browser

ICNP® C-Space will house the new ICNP® Version 2 browser. The browser provides users and others who are interested in ICNP® options to browse and search the terminology. There will also be access to download the ICNP® from the browser. Incorporated with the browser download is a mechanism by which users can read and sign an ICN non-commercial Use Agreement. Nurses and others who are using ICNP® for research or development will then be included in the data base for users.

The browser is organised using the 7-Axis Model, with the addition of the diagnosis, outcome and intervention pre-coordinated statements. Work is progressing on adding ICNP® translations to the browser.

Browser and Translation (BaT) Tool

The BaT Tool is accessible from the ICN website and work is progressing to connect the translation tool to ICNP® C-Space. BaT is a software tool that assists distributive work by translation teams via the Internet. A hierarchy of users can be established for

the work of translation, allowing and encouraging wide participation and support while also ensuring a clear mechanism for decision-making. For more information on the BaT Tool see <http://docu.icnp-bat.de/doku.php>

Quality Improvement

ICNP® development is an ongoing process. The terminological principles of concept non-ambiguity, non-redundancy and non-vagueness guide the ICNP® concept modelers in their analysis and revision of ICNP®. Traditional ways of describing nursing in practice environments are constantly tested as the modelers aim to represent the domain of nursing in the terminology.

ICNP® quality improvement uses both machine-based and human-based processes to ensure consistency and accuracy of the terminology. As the date for version release approaches, the terminology is subjected to iterative analyses for 1) consistent and appropriate concept placement in the terminology, 2) code accuracy and non-duplication, 3) correctness of spelling and English usage, 4) correctness of annotations, and 5) consistency in formal modelling. Many changes were incorporated into Version 2 to improve the terminology and meet the needs of users.

ICN welcomes input and ideas in this ongoing effort of development and improvement. Please share your ideas with the ICNP® team members and participate in this important advance for nursing.

Chapter 4 - Summary

Twenty years after the Congress of Nurse Representatives approved ICN to initiate work toward an ICNP®, Version 2 was released. The release of ICNP® Version 2 is a landmark event for the ICNP® Programme.

In 2008 and 2009, the first two ICNP® catalogues were completed. Catalogues had long been a goal of the ICNP® Programme since they provide small usable subsets of the terminology that can facilitate the application of ICNP® in systems at the point of nursing care. The release of Version 2 also marked the codification of maintenance and distribution policies to support and guide continued growth of the terminology and make the processes and procedures more transparent. A release cycle of every two years was established to assist users to plan updates of the terminology. Quality improvement procedures were updated to ensure, in so far as possible, that the ICNP® meets relevant international standards.

The new tools on the ICNP® C-Space will support participation and collaboration in continued development of the terminology. This web-based resource will provide access to the current version of ICNP® and support worldwide review, catalogue development, and translation.

ICN is thankful to all those who contributed to the advancement of ICNP® and the release of Version 2. Continuing and new partnerships will assure that ICNP® continues to evolve as the international standard for nursing terminology.

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Glossary

Catalogue: Subsets of ICNP® represented as nursing diagnoses, outcomes and interventions appropriate for particular areas of care.

Classification: Systematic arrangement of concepts connected by generic relationships according to defined criteria.

Classification System: Assignment of concepts into groups based upon common characteristics.

Codes: Context free, unique identifiers.

Concept: The embodiment of some specific meaning and not a code or character string. (ISO/TS 17117)

Concept orientation: A terminology that has as its basic unit a concept. (ISO/TS 17117)

Hierarchical Classification: Classification in which sequential levels have fixed characteristics that distinguish one level from another.

Internal Consistency: Relationships between concepts should be uniform across parallel domains within the terminology. (ISO/TS 17117)

Knowledge name: Concept modeled in web ontology language.

Mapping: Linguistic and semantic comparisons of one terminology to another.

Multi-axial Structure: Multiple axes representing a complex phenomenon (e.g. nursing practice domain).

Non-ambiguity: Explicit definition with each term clearly expressed and easily understood.

Non-redundancy: One preferred way of representing a concept or idea.

OWL (Web Ontology Language): Semantic web standard that provides a framework for asset management, enterprise integration and the sharing and reuse of data on the Web. (<http://www.w3.org/TR/owl-features>)

Preferred Term: Common use word(s) for application of the knowledge name by the user.

Protégé Software: Open-source developmental environment for ontology and knowledge-based systems. (<http://protege.stanford.edu/plugins/owl/>)

Reference Terminology: The set of canonical concepts, their structure, relationships and, if present, their systematic and formal definitions define the core of the controlled health terminology. (ISO/TS 17117)

Terminology: Set of concepts belonging to a specific body of knowledge.

Terminology Model: Concept representation that is optimized for the management of terminologies and that can be used as a specification for terminologies.

Unified Nursing Language System: System that can represent existing vocabularies and facilitate the development of local concepts and vocabularies, and that can compare different vocabularies in order to combine data from different sources.

Foreword – ICNP® Version 1 (2005)

The International Council of Nurses is delighted with this release of the International Classification for Nursing Practice (ICNP®) Version 1. ICN's mission is to represent nursing world wide, advance the profession and influence health policy. The ICNP® is a tool that can contribute to this mission by allowing nurses to describe, examine and compare nursing practice at local, regional, national, and international levels. The ICNP® allows and supports collection and analyses of nursing data across countries, cultures and languages. With the information generated by users of the ICNP®, the practice of nursing can be articulated and decision-making can be based on reliable and valid data.

The development of the ICNP® has relied on the contribution of many individuals and groups. Since the inception of the ICNP® in 1989, nurses and their professional colleagues have completed research studies, development projects, translations, critical reviews and evaluations, and strategic planning for the earlier versions (alpha, beta, beta 2) which have now culminated in ICNP® Version 1.

National Nurses Associations (NNAs) have sponsored ICNP® working groups and professional meetings and they have disseminated ICNP® products and information to their constituents. Individual nurses have served on ICNP® committees; participated in ICNP® meetings, conferences and workshops; carried out translations; and conducted research and testing of the ICNP®. Informatics experts in nursing and other disciplines have provided formative feedback and evaluation throughout the development of the ICNP®. It is impossible to acknowledge so many people and partners who have contributed to the development of the ICNP® Version 1. We look forward to continuing to work with these partners in addition to expanding our partnerships with other interest groups and specialist associations, governments and health ministries, and industry to realize the vision of the ICNP®.

The ICNP® Programme and its product, the ICNP®, must always be considered dynamic and progressive. As the body of knowledge about nursing practice is built by continued research and development, both in the ICN Accredited ICNP® Centres and by individuals or groups of researchers and clinicians, we expect the ICNP® to be constantly advancing in breadth and depth so that nursing can best be represented by using this international standard. ICN is committed to the vision of ICNP®. We look forward to sharing opportunities to advance ICNP® and to have nursing data readily available and used in health care systems worldwide. Through sharing nursing data and information we can promote evidenced-base, accountable health care and improve health outcomes for our patients worldwide.

Judith Oulton
Chief Executive Officer
International Council of Nurses

Foreword – ICNP® Alpha Version (1996)

We do not take lightly our reference to the development of the International Classification for Nursing Practice (ICNP®) as the nursing profession's next advance. We are convinced of its vital importance to nursing's progress.

Throughout this century nursing leaders have identified the lack of a universal language to define and describe nursing practice as an impediment to the maturation of nursing as a science and a discipline. It was not until 1991 that ICN agreed to lead such a global initiative, well recognizing the responsibility as critical and the challenge as formidable.

The magnitude of the project, as outlined in this report, is vast in scope and complexity. The terms of reference and criteria whereby the product will be measured are ambitious, but necessary, if ICNP® is to serve the purposes prescribed.

The resource commitment is, of course, commensurate with the enormity of the project. Progress to date has only been possible through the commitment of funds from ICN, as well as external sources, and the contributions of expertise and services from the core consultants and advisors and other individuals throughout the world. The profession and its members owe a debt of gratitude to all who have supported the project in a variety of ways. To the extent that nursing is improved in value and visibility, policymakers and society as a whole will benefit.

The awareness from the inception that ICNP® will always be a work in progress, never completed, has also been daunting. It will be as a living organism, always changing as nursing's role, science, and practice evolve.

Throughout the challenges of the project, our commitment has been sustained and reinforced by the encouragement we have received from practising nurses, and from educators, researchers, managers and policymakers who have eagerly reaffirmed that this detailed description and classification for nursing practice is essential for their work and for the future of the profession.

Dr Margretta Madden Styles
President
International Council of Nurses

ICNP® Timeline (1989-2005)

- 1989 Resolution to establish an International Classification for Nursing Practice (ICNP®) was passed by the Council of National Representatives (CNR) at the ICN 19th Quadrennial Congress in Seoul, Korea.
- 1990 ICNP® Development Team formed.
- 1991 Preliminary literature search and a survey of member associations were undertaken to identify classification systems in use or being developed around the world (Wake et al. 1993).
- 1992 Technical Advisory Group of nurses from six countries (Chile, Israel, Jamaica, Japan, Kenya, and Nepal) met in Geneva to test the feasibility and applicability of the ICNP® work at the global level.
- 1993 Working paper listing terms used in the nursing literature and existing classifications to describe nursing diagnoses, interventions and outcomes, was published (ICN 1993).

Three presentations at the ICN 20th Quadrennial Congress in Madrid in June - a plenary session, a special interest session and a poster session – demonstrated an overwhelming interest and enthusiasm for ICNP® by nurses from many countries.

- 1994 Advisory Meeting on the Development of an Informational Tool to Support Community-Based and Primary Health Care Nursing Systems, which was generously funded by the W.K. Kellogg Foundation, was held in Tlaxcala, Mexico. This meeting brought together nurses from nine countries in Africa, North America, and South America to explore the potential of the ICNP® for nursing in primary health care.
- 1995 Workshop similar to the Advisory Meeting of 1994 was held in Taiwan and included nurses from Taiwan, Japan, Korea, Malaysia, New Zealand, Philippines, Singapore, Thailand and Western Samoa.

With funds from the European Union and led by the Danish Institute of Health and Nursing Research, a project was launched to promote the ICNP® and to test the Alpha Version in several countries in Europe (Mortensen, 1996).

- 1996 W.K. Kellogg Foundation agreed to fund a project in selected countries in Africa and Latin American to develop country level capacity to contribute to the development of the ICNP®.

Alpha version of ICNP® consisting of a Classification of Nursing Phenomena (the phenomena which nurses diagnose) and a Classification of Nursing Interventions was published.

- 1997 At the ICN 21st Quadrennial Congress in Vancouver, ICNP® was the topic of a plenary session and several posters. Focus groups were held to gather more information for the development of the ICNP®.

- 1998 2nd Workshop on the ICNP® - Asia/Pacific Region was held in Taiwan in September.
- 1999 Publication of ICNP® Beta Version.
- 2000 ICN established the ICNP® Programme with three functional areas: communication and marketing, research and development, and coordination and program management.

 ICNP® Translators and Reviewers Conference, sponsored by Telenurse and ICN in Coimbra, Portugal.

 ICNP® Evaluation Committee established. (The committee was discontinued in 2004.)

 First ICNP® Bulletin published.
- 2001 ICNP® was the topic of a plenary session and of research presentations at the ICN 22nd Quadrennial Congress in Copenhagen.

 Publication of ICNP® Review Process: How to Participate.

 Publication of ICNP® Beta 2 Version.
- 2002 Establishment of ICN Accredited Centres for ICNP® Research & Development.
 ICNP® Strategic Advisory Group established.
- 2003 Accreditation of the Deutschsprachige ICNP® Nutzergruppe (German Speaking ICNP® User Group) as the first ICN Accredited ICNP® Research & Development Centre.
- 2004 First Countdown to ICNP® Version 1.0 published.
- 2005 Accreditation of the Research Centre for Nursing Practice, University of Canberra and the Canberra Hospital – ICN Accredited ICNP® Centre. (This Centre was closed in 2008.)

 Accreditation of the Chilean Centre for ICNP® Research and Development, affiliated with the Nursing Department of the University of Concepción.

 ICNP® panel presentation, workshop, and the first ICNP® Research and Development Centres Consortium meeting and reception were held at the 23rd Quadrennial ICN Congress in Taiwan.

 Publication of ICNP® Version 1.0.