

# **New Zealand participation in The International Nutrition Care Process and Terminology Survey (INIS) 2023**

## **Background**

The nutrition care process (NCP) and its associated standardised terminology (NCPT), (referred to collectively as NCP/T), is a systematic framework for critical thinking, decision making, and communication for dietetic practitioners worldwide. Use of the NCP/T supports dietitians to make decisions that address nutrition-related problems, leading to safe and effective nutrition care [1-3])

The NCP/T supports evidence-based practice, improves the quality of care, improves interdisciplinary communication, and facilitates performance evaluation and training (ref). Use of the consistent terminology provided by the NCPT leads to targeted nutrition interventions and allows for comparisons of outcomes in nutrition practice and nutrition research. Notably, the application of the NCP/T improves the rate of nutrition problem resolution [1]. The NCP/T was initially developed by the Academy of Nutrition and Dietetics (AND) in the USA [1-3] and is now available in several languages and promoted by Dietetic Associations around the globe, including Dietitians New Zealand and Dietitians Australia. Global implementation would assist in confirming the efficacy of dietetic care; however, such analysis is currently limited due to varying implementation rates between countries.

In 2017, an internationally working group, co-ordinated by researchers at Uppsala University, Sweden, disseminated the first International NCP Implementation Survey (INIS) to dietitians in 10 countries <https://ikv.uu.se/research/aktuella-forskningsprojekt/inis/>. The survey aimed to investigate factors that were associated with NCP/T knowledge and use among dietetic professionals and sought to understand how the implementation of the NCP/T could be strengthened [4]. Dietitians from New Zealand and Australia took part in the survey. The working group has now expanded to include 18 countries and the second INIS survey is planned for 2023.

## **Significance of the INIS 2023 Study**

Since the first INIS study 5 years ago, the implementation of electronic health records (EHR) has increased worldwide. Concurrently, new health informatics systems are being developed and implemented, increasing the need for standardised and structured terminology to document nutrition-related problems. Standardised terminologies are key in this process to assure semantic interoperability, i.e., ensuring that a specific term has the same meaning in different systems [5,6]. The NCPT terminology is currently being harmonized with and integrated in large international classification systems such as the Systematized Nomenclature of Medicine Clinical Terms (SNOMED CT) and the Logical Observation Identifier Names and Codes (LOINC) [2,7,8]

A global perspective is essential for evaluating and developing standardised terminologies and classifications in health care. Perspectives of health care professionals from high- and low-income countries, and different cultural backgrounds and traditions are required to learn how healthcare processes and terminologies could be harmonised.

The 2023 INIS survey will provide enhanced information regarding the similarities and differences in NCP and NCPT implementation and use. This information will be used to guide dietetic associations, both nationally and internationally, in the ongoing implementation process and to assist with further development of nutrition care standards.

# **The International Nutrition Care Process and Terminology Survey 2023: Standardized working process and terminology in nutrition care from a global perspective**

## **Aim**

This international research project aims to enhance knowledge and understanding of how and to what extent nutrition and dietetics professionals have implemented the standardised NCP and its associated terminology, the NCPT.

## **Approach**

This cross-sectional survey will include nutrition and dietetics professionals from 18 high, higher-middle and lower-middle countries. A survey/questionnaire will be disseminated to dietitians in the included countries during February/March 2023. The survey will be administered online, using the platform Survey & Report (Artisan Global Media) or similar. Paper-based surveys will be used where countries have limited Internet coverage (e.g. Kenya).

## **Survey**

The survey, International NCP and NCPT Implementation Survey (INIS), is currently validated in ten countries and seven languages [4], with four modules focusing on:

Demographic information (5 questions)

- NCP/T implementation (14 questions)
- NCP/T attitudes (15 questions)
- NCP/T knowledge (8 questions)

Additional questions focusing on EHR systems and outcomes measurement will be developed and validated by dietitians in each country (August 2022). When testing is complete, the validated questions will be included in the INIS 2023 survey.

## **Outcomes**

Survey responses will increase knowledge of follow changes in NCP/NCPT implementation, attitudes and knowledges. similarities and differences in NCP and NCPT implementation and use across the various countries. Findings will guide dietetic associations, both nationally and internationally, in the ongoing implementation and development of nutrition care standards.

## **Funding request**

The original INIS survey identified that New Zealand and Australian dietitians, along with those from the United States, were the highest users of the NCPT [9]. However, limited access to technical solutions, including EHR, was identified as a barrier to NCP/T use by approximately one-third of New Zealand dietitians [10]. The increased use of EHR and health information platforms in New Zealand mirrors global advancements however little is known about how dietitians are using this technology. Anecdotally, NCP terminology may be entered as free text making analysis of care trends and outcomes difficult.

## **Local Principal Investigators**

**Llyn Lloyd**, *NZRD*  
Nutrition & Dietetics  
Auckland District Health Board

**Sue MacDonell**, *NZRD, PhD*  
Senior Dietitian/Research Fellow  
TBI Health / Auckland University

## References

1. Swan, W.I., et al., *Nutrition Care Process (NCP) update part 2: Developing and using the NCP terminology to demonstrate efficacy of nutrition care and related outcomes*. Journal of the Academy of Nutrition and Dietetics, 2019. **119**(5): p. 840-855.
2. Swan, W.I., et al., *Nutrition Care Process and Model Update: Toward Realizing People-Centered Care and Outcomes Management*. J Acad Nutr Diet, 2017. **117**(12): p. 2003-2014.
3. Lacey, K. and E. Pritchett, *Nutrition Care Process and Model: ADA adopts road map to quality care and outcomes management*. J Am Diet Assoc, 2003. **103**(8): p. 1061-72.
4. Lovestam E, Vivanti A, Steiber A, Bostrom AM, Devine A, Haughey O, Kiss CM, Lang NR, Lieffers J, Lloyd L, et al., *The International Nutrition Care Process and Terminology Implementation Survey: Towards a global evaluation tool to assess individual practitioner implementation in multiple countries and languages*. Journal of the Academy of Nutrition and Dietetics, 2019. **119**(2): p. 242-260.
5. McLachlan, S., et al., *Towards standardisation of evidence-based clinical care process specifications*. Health Informatics Journal, 2020: p. 1460458220906069.
6. Landsting, S.S.R.o., *Vision e-hälsa 2025– gemensamma utgångspunkter för digitalisering i socialtjänst och hälso- och sjukvård*. 2016: Stockholm.
7. SNOMED CT. 2020 [cited 2020 06-26]; Available from: <https://www.snomed.org/snomed-ct/five-step-briefing>.
8. SNOMED CT. SNOMED CT. 2021 [cited 2021 09-21]; Available from: <https://www.snomed.org/snomed-ct/five-step-briefing>.
9. Lovestam E, Steiber A, Vivanti A, Bostrom AM, Devine A, Haughey O, Kiss CM, Lang NR, Lieffers J, Lloyd L, et al: *Use of the Nutrition Care Process and Nutrition Care Process Terminology in an International Cohort Reported by an Online Survey Tool*. J Acad Nutr Diet 2019, **119**:225-241.
10. Lovestam E, Vivanti A, Steiber A, Bostrom AM, Devine A, Haughey O, Kiss CM, Lang NR, Lieffers J, Lloyd L, et al: *Barriers and enablers in the implementation of a standardised process for nutrition care: findings from a multinational survey of dietetic professionals in 10 countries*. J Hum Nutr Diet 2020.