Standardised Nutrition Diagnosis Terminology: Implications for Dietetics Practice

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A thesis submitted for the degree of Doctor of Philosophy

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Statement of originality

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I hereby certify that the work embodied in this thesis is the result of original research, which was completed subsequent to admission to candidature for the degree of Doctor of Philosophy.

Zuriati Ibrahim
Dedication

It is with much love and gratitude that I dedicate this thesis to my Mum, without whose unconditional love, wholehearted support and constant prayers, this task would have seemed overwhelming. You are my inspiration, strength and resilience when the world seems too hard to cope with. To my Dad, thank you for your encouragement and constant prayers in your own way. I am greatly indebted to you always and love you both very much.
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All praises are due to Almighty Allah, the most beneficent and the most merciful, who in His infinite mercy and grace enabled me to complete this thesis.

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<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>ADA</td>
<td>American Dietetic Association</td>
</tr>
<tr>
<td>ADI</td>
<td>assessment, diagnosis, intervention</td>
</tr>
<tr>
<td>ADIME</td>
<td>assessment, diagnosis, intervention and monitoring and evaluation</td>
</tr>
<tr>
<td>AEB</td>
<td>as evidenced by</td>
</tr>
<tr>
<td>AMA</td>
<td>American Medical Association</td>
</tr>
<tr>
<td>ANOVA</td>
<td>analysis of variance</td>
</tr>
<tr>
<td>AU</td>
<td>Australia</td>
</tr>
<tr>
<td>BMI</td>
<td>Body Mass Index</td>
</tr>
<tr>
<td>CA</td>
<td>Canada</td>
</tr>
<tr>
<td>CAP</td>
<td>College of American Pathology</td>
</tr>
<tr>
<td>CINAHL</td>
<td>Cumulative Index to Nursing and Allied Health Literature</td>
</tr>
<tr>
<td>CPT</td>
<td>Current Procedural Terminology</td>
</tr>
<tr>
<td>DAR</td>
<td>Diagnosis, assessment and recommendation</td>
</tr>
<tr>
<td>DCV</td>
<td>Diagnostic content validity</td>
</tr>
<tr>
<td>DOB</td>
<td>Date of birth</td>
</tr>
<tr>
<td>D-S NDC</td>
<td>dietetic specific nutrition diagnosis codes</td>
</tr>
<tr>
<td>EBP</td>
<td>evidence-based practice</td>
</tr>
<tr>
<td>EHR</td>
<td>electronic health record</td>
</tr>
<tr>
<td>ICD</td>
<td>International Classification of Diseases</td>
</tr>
<tr>
<td>ICD-10-AM</td>
<td>International Classification of Diseases Australian Modification</td>
</tr>
<tr>
<td>ICF</td>
<td>International Classification of Functioning, Disability and Health</td>
</tr>
<tr>
<td>ICNP</td>
<td>International Classification of Nursing Practice</td>
</tr>
<tr>
<td>IDNT</td>
<td>International Dietetics and Nutrition Terminology</td>
</tr>
<tr>
<td>IHI</td>
<td>Indicator for Intervention</td>
</tr>
<tr>
<td>IHTSDO</td>
<td>International Health Terminology Standards Development Organisation</td>
</tr>
<tr>
<td>LOINC</td>
<td>Logical Observation Identifiers Names and Codes</td>
</tr>
<tr>
<td>LOS</td>
<td>length of stay</td>
</tr>
<tr>
<td>MNA</td>
<td>Mini Nutritional Assessment</td>
</tr>
<tr>
<td>MNT</td>
<td>Medical Nutrition Therapy</td>
</tr>
<tr>
<td>MRN</td>
<td>medical record number</td>
</tr>
<tr>
<td>MY</td>
<td>Malaysia</td>
</tr>
<tr>
<td>NAHCC</td>
<td>National Allied Health Classification Committee</td>
</tr>
<tr>
<td>NANDA</td>
<td>North American Nursing Diagnosis Association</td>
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<tr>
<td>NCP</td>
<td>Nutrition Care Process</td>
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<td>NCPM</td>
<td>nutrition care process and model</td>
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<td>NDT</td>
<td>Nutrition diagnostic term</td>
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<td>NHDD</td>
<td>National Health Data Dictionary</td>
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<tr>
<td>NIC</td>
<td>Nursing Interventions Classification</td>
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<td>National Library of Medicine</td>
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<td>NOC</td>
<td>Nursing Outcomes Classification</td>
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<tr>
<td>NZ</td>
<td>New Zealand</td>
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<tr>
<td>PES</td>
<td>problem, etiology, signs and symptoms</td>
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<td>PIE</td>
<td>problem, intervention and evaluation</td>
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<tr>
<td>QIC</td>
<td>quality improvement cube</td>
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<tr>
<td>RD</td>
<td>registered dietitian</td>
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<tr>
<td>RT</td>
<td>related to</td>
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<tr>
<td>SGA</td>
<td>Subjective Global Assessment</td>
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<tr>
<td>SND</td>
<td>standardised nutrition diagnosis</td>
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<tr>
<td>SNOMED</td>
<td>Systematised Nomenclature of Medicine</td>
</tr>
<tr>
<td>SNOMED CT</td>
<td>Systematised Nomenclature of Medicine Clinical Terms</td>
</tr>
<tr>
<td>SNOMED RT</td>
<td>Systematised Nomenclature of Medicine Reference Terminology</td>
</tr>
<tr>
<td>SPSS®</td>
<td>Statistical Package for the Social Sciences</td>
</tr>
<tr>
<td>TPN</td>
<td>Total Parenteral Nutrition</td>
</tr>
<tr>
<td>UK</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>UMLS</td>
<td>Unified Medical Language System</td>
</tr>
<tr>
<td>US</td>
<td>United States</td>
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<tr>
<td>WHO</td>
<td>World Health Organisation</td>
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Abstract

Standardised Nutrition Diagnosis (SND) as part of the Nutrition Care Process (NCP) has been implemented in the United States by the American Dietetic Association (ADA). This study is the first investigation of the potential for SND to be implemented beyond the United States. Research was conducted in two phases: (1) a case study of Australian dietetics practice and (2) a cross-sectional mail survey designed to investigate the extent of, and potential for, international SND implementation. Phase 1 involved application of descriptive case study methodology to an existing dataset of 274 patient records from three Australian hospitals. Of these records, 85 showed evidence of attendance by a dietitian. Results revealed incomplete documentation of the NCP in Australian dietetics practice, lack of understanding of the Nutrition Diagnosis step and use of non-standardised terms in documentation of nutrition care. In Phase 2, a convenience sample (n=420) of clinical dietetics practitioners in Australia, Canada, Malaysia, New Zealand, the United States and the United Kingdom was mailed a pre-tested and piloted self-administered questionnaire. Completed questionnaires were returned by a total of 85 practitioners from Australia (55.3%), Canada (25.9%) and Other Countries (18.8%). The questionnaire was also completed by a comparison sample (n=37) of third-year Australian dietetics students. When asked to identify, define, justify and rank NDTs using information provided in a case scenario, most practitioners, regardless of country of practice, did not demonstrate ability to accurately apply SND. Level of experience with medical nutrition therapy was demonstrated to have no impact on whether practitioners correctly identified, justified or ranked NDTs; however, less-experienced practitioners (≤10 years) were more likely to provide valid definitions for NDTs than more-experienced (>10 years) practitioners. The Australian dietetics students were no more or less adept at SND application than the Australian dietetics practitioners. This research highlights widespread lack of awareness and understanding of the NCP and SND. Complexity of SND is flagged as a potential obstacle to successful international adoption, and a strong case is made for supporting implementation with rigorous educational programs and systematic ongoing professional training. Anticipated challenges to SND implementation are far outweighed by the opportunities it presents to ensure that care of patients is translatable within and across settings, and that dietetics professionals are able to effectively and convincingly communicate their distinct role in patient outcomes.