A Clinically Relevant Diagnosis Code for "Malnutrition in Adults" Is Needed in ICD-11

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Introduction

Malnutrition is a devastating condition with adverse outcomes in terms of complications, prognosis and quality of life (1-5). It is a complex condition with many aetiologies, that evolves separately or from the interaction between food deprivation and catabolic processes linked to disease-related inflammation.

Textbooks define malnutrition in adults as "a state resulting from lack of intake or uptake of nutrition that leads to altered body composition (decreased fat free mass) and body cell mass leading to diminished physical and mental function and impaired clinical outcome from disease". Caring for malnutrition in clinical settings requires attention to prevention, diagnosis and management of nutritional and metabolic alterations.

International Classifications of Diseases

Standardised evidence-based terminology accepted in the professional nutrition community is crucial to meet today's nutritional challenges in various clinical settings. International Classifications of Diseases (ICD) is the foundation for the identification of diseases and statistics globally. Up to recently, ICD-10 is the global tool for encoding diagnoses. During the coming years ICD-10 will be exchanged for ICD-11.

The ICD-10 terminology of malnutrition is influenced by experiences from famines in poorer parts of the world during the 60-ies and 70-ies, as exemplified by terms like kwashiorkor (protein malnutrition) and marasmus (energy malnutrition). The diagnostic focus is mainly on identifying deprivation and deficiencies of particular nutrients.

However, the clinical settings and the clinical picture of malnutrition has changed, expanded and become even more complex. Draught, flooding, poverty and war, with ensuing starvation-related malnutrition still exist, but malnutrition is today also found in huge numbers of individuals, often older, exposed to catabolic diseases and other stressors in wealthy countries with developed health and elderly care systems.

Urgent need of a clinically relevant ICD-11 diagnosis code for malnutrition in adults

Thus, the clinical picture of malnutrition is characterized by a complex combination of various etiologic factors, like food deprivation and inflammatory conditions, and phenotypic expressions like weight loss and muscle wasting. For this reason, the clinical nutrition community needs an ICD coding of "Malnutrition in adults" that reflects the current malnutrition perception, and that may support clinical decision-making in every day practice.

The pending ICD-11 in its present edition does not meet this requirement. Currently, there are two ICD-11 codes relating to malnutrition in adults. "Underweight in adults" (5B54) appears to be the major malnutrition concept for adults, that is described by BMI<18.5 kg/m^2. Malnourished adults in healthcare in most regions of the world now rarely fulfil this criterion, at least not until late disease stages. On the contrary, many malnourished individuals are in fact overweight or obese, and still face serious adverse malnutrition related outcomes.

Diagnostic criteria currently used

Malnutrition core diagnostic criteria used in clinical settings today have evolved to account for better understanding of malnutrition in the context of disease-related inflammation and to encompass malnutrition across the spectrum of BMI (1-5). Approaches to malnutrition diagnostic assessment base on combinations of phenotypic and etiologic criteria, a construct that is shared by all the leading tools and instruments. This is the case for nutrition risk screening tools; i.e. Nutrition Risk Screening 2002, Malnutrition Screening Tool, Malnutrition Universal Screening Tool and Mini Nutritional Assessment – Short Form. Diagnostic assessment tools like Subjective Global Assessment, Mini Nutritional Assessment and the Academy of Nutrition and Dietetics-ASPEN approach use similar combinations of criteria to diagnose malnutrition (1-5).

Recently, the Global Leadership Initiative on Malnutrition (GLIM), that includes representatives of four major global nutrition societies with reach that spans Europe (ESPEN), North America (ASPEN), Latin America (FELANPE) and Asia (PENSA) agreed on criteria to diagnose malnutrition

(6, 7). The GLIM effort is based on a unanimous desire to reach a global consensus on how to combine the etiologic and phenotypic criteria. GLIM advocates that the first step is screening for malnutrition risk using any validated screening tool, followed by diagnostic assessment and confirmation based on the combination of one of three phenotypic criteria; i.e. weight loss, underweight or low muscle mass, with one of two etiologic criteria; i.e. reduced food intake/food assimilation or high disease burden/inflammation.

Since the introduction of the GLIM concept in early 2019 the acceptance and implementation of the concept is strong with so far around 1000 citations of the original papers. More than 100 validation studies (for criterion and predictive validity) support the feasibility of the GLIM concept.

Code for "Malnutrition in adults" as an amendment for ICD-11

Representatives of the global nutrition community, i.e. more than 40 international clinical nutrition societies, together with patient representatives, and in collaboration with the Swedish National Board of Health and Welfare, proposed late 2020 to WHO/ICD-11 that ICD-11 is amended by a code for the diagnosis of "Malnutrition in adults" in accordance with the guidelines provided above. The concept includes three sub-categorical entities; i.e. disease-related malnutrition (DRM) with inflammation, DRM with no perceived inflammation and malnutrition due to starvation not related to disease. Moreover, post-coordination options are moderate malnutrition and severe malnutrition defined by the magnitude of aberration in the phenotypic criteria.

The global clinical nutrition community trusts that WHO listen to the voices of health professionals and patient organizations. We hope it is time for the ICD system to provide adequate descriptors and diagnosis codes to support health workers to improve nutritional care world-wide.

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