



# Taking the GLIM framework from research into clinical practice: a Swedish initiative

Development of a combined physical-online program for dietitians to endorse the use of muscle mass assessment in clinical practice

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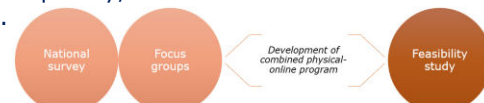
## Description of the initiative

- **Background/context:** In 2019, the Global Leadership Initiative on Malnutrition (GLIM) published criteria for the diagnosis of malnutrition<sup>1</sup> and since then, research on the new framework has been excessive. How GLIM should be properly operationalized and implemented into clinical practice is yet to be understood<sup>2</sup>.
- **Rationale:** From 2021, the professional association for registered dietitians in Sweden recommend all dietitians to use the GLIM criteria to diagnose malnutrition in adults. However, the implementation of the GLIM framework in clinical practice has not been straightforward, especially since all five criteria should be assessed to ensure its validity<sup>3</sup>. Particularly, in Sweden, the assessment of the phenotypic criterion muscle mass hold hesitations towards its applicability and use in clinical practice, although being a criterion of outmost importance to accurately assess and evaluate nutritional status<sup>4,5</sup>.
- **Objectives and scope:** The research project will use the silent knowledge of practicing dietitians to inform the development of a combined physical-online program to endorse the use of muscle mass assessment. The objective is to test if attending the program will increase perceived relevance, comprehensibility, security, and subsequently, the use of muscle mass measurements by dietitians for the accurate application of GLIM in clinical practice.

<sup>1</sup>Cederholm et al. *Clin Nutr*, 2019.  
<sup>2</sup>Rothenberg et al. *Clin Nutr ESPEN*, 2024.  
<sup>3</sup>Cederholm et al. *Curr Opin Clin Nutr Metab Care*, 2023.  
<sup>4</sup>Barazzoni et al. *Clin Nutr*, 2022.  
<sup>5</sup>Deutz et al. *J Am Med Dir Assoc*, 2019.

## Planned activities & deliverables

- **Steps/deliverables:** The project will use a mixed-methods two-phase approach. In phase 1, a national online survey targeting dietitians will be distributed through the professional association for registered dietitians in Sweden (n ≈1300 members). The survey will include questions on current practice of assessing muscle mass. Also, focus groups will be held with dietitians to understand perceived barriers/facilitators when assessing muscle mass. Results from phase 1 will inform the development of a program that will combine online (theoretical knowledge) and physical (applied knowledge) attendance. In phase 2, the program will be tested in a feasibility study with dietitians from different regions in Sweden. Use of muscle mass assessment and perceived relevance/comprehensibility/security will be assessed at baseline and at 1 and 6 months after attending the program using an online survey and information from medical records for the recording of GLIM. After phase 2, the program will be developed further to secure its quality.
- **Achievements up to 24 months:** Phase 1 will be carried out during the first year and phase 2 during the second year. In parallel with this process, results will be published in a scientific journal and presented at conferences.



## Resources & enablers

- **Personnel/financial needs:** This is a doctoral research project within the Swedish national doctoral program for dietitians: Integrating Sustainability in Nutrition Care, InSyNC. The research group consists of dietitians with long-standing experience in clinical nutrition research and dietetic practices. The doctoral student will perform data collection/analyses. Financial support are needed for traveling/accommodation for researchers conducting the focus groups as well as reimbursement for loss of income/traveling costs for the dietitians attending. For the program development, the research group will have a 2-day working session which will generate costs related to traveling/accommodation/loss of income. Financial support is also needed for equipment, transcription of focus groups, statistical analysis, and publication costs. The program will be given free-of charge and will generate costs related to traveling/accommodation for researchers leading the program. Dietitians are expected to be able to attend the program during ordinary working hours as part of their lifelong learning.
- **How the grants will be spent:** In total, €24,000\* will be spent on: focus groups (€8,800), program development and execution (€11,200), equipment (€700), transcription/statistical analysis (€1,600), and publication costs (€1,700).
- **Success factors:** The program will be developed by a research group skilled in clinical nutrition practice and research, informed by behaviour change/implementation theory, and built from the expressed needs of practicing dietitians. \*Indirect costs included

## Results/outcomes & expected impact

- **Implementation and transferability:** After the project, the program is ready to be launched nationally and translated versions of the program can secure international assess, preferable through the national professional association/PEN society in each country. To further secure implementation, the program can be customized to other healthcare professionals and be used at bachelor/master level, both in dietetics as well as within other relevant healthcare education programs.
- **What makes the project innovative:** The project originates from real-time clinical challenges and has the potential to advance nutritional care in clinical practice.
- **How the project contributes to optimal nutritional care:** To reach optimal nutritional care, available resources ought to be used in the right way, to the right extent, at the right time. Seen from a patient perspective; having access to equal nutritional care that acknowledges everyone's specific needs is essential. Creating optimal nutritional care is also about letting scientific knowledge inform and develop healthcare. The expected impact from the present research project is to enhance nutritional care by:
  1. Improving dietitians' perceived relevance/comprehensibility/security of performing muscle mass assessment.
  2. Creating conditions to properly assess all five GLIM criteria for the diagnosis of malnutrition in clinical practice.
  3. Securing the quality performance of nutrition assessment and thus, securing a more effective use of healthcare resources.
  4. Moving towards a more equal nutritional care where patients with malnutrition are properly assessed and re-assessed.
  5. Bridging the gap between research and clinical practice.



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