PallNutri Connect - A Digital Bidirectional Nutritional Care Platform for Palliative Patients

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Description of the initiative

Disease-related malnutrition affects up to 80% of palliative oncology patients in Europe (Bossi 2021; Cotogni, 2025), leading to reduced quality of life, treatment intolerance, and avoidable hospitalisations. In Latvia, nutritional care in palliative settings remains fragmented, inconsistently implemented, and largely unsupported by structured digital tools (Krevica, 2024). There is currently no unified clinical pathway, no patient-facing support system, and no national-level visibility of nutritional care delivery (Hutter, 2026).
Aligned with the 2026 MNI priority to support practical implementation of nutritional care pathways rather than screening alone, this initiative addresses the critical gap between clinical decision-making and real-life patient adherence at home.
PallNutri Connect introduces a two-way digital ecosystem. First, a clinical decision support system (CDSS) for healthcare professionals, which includes insights from quantitative data of 3000+ palliative patients in Latvia. Second, a patient-caregiver web interface enabling regular screening, adherence to the relevant ESPEN guidelines, and real-time communication. Supported by a real-time national dashboard, the project ensures both individual patient impact and system-level improvement, while maintaining a strong focus on quality of life and personalised care in palliative settings.

Objectives and scope

(1) Implement a standardised clinical nutrition pathway for palliative oncology patients across pilot centres (palliative care units)
(2) Enable real-time clinician–patient interaction and tele-nutrition support on-demand (via videozvans platform, which is ready for secure integration)
(3) Contribute to the establishment of a national, anonymised nutritional care monitoring infrastructure (role-model for a secure deployment)
(4) Generate evidence for clinical, economic, and policy impact
(5) Develop a scalable model transferable across Baltic and EU healthcare systems
(6) Improve patient-reported outcomes (QoL, symptom burden) with adherence to prescribed nutritional therapy (ONS/EN/PN) and care plans
(7) Introduce an objective KPI ranking for clinics following ESPEN guidelines and WHO principles

Planned activities & deliverables

This is a hybrid initiative involving retrospective palliative quantitative data analysis, which is already collected from national health databases and depersonalized, following prospective platform development to include the missing data collection & digitalization techniques that supports regular nutrition screening and reduces bureaucracy burden, with the help of GLIM, NRS-2002, MUST, SGA, ESPEN risk assessment and Home Environmental Assessment via HEAP-R via a unified platform, combining objective and subjective data, enabling optimal decisions, better health outcomes and research.
Phase 1 (first 6 months): PallNutri Connect platform development by BirgerMind ICT team and Rūre medical team, deployment on a local secure server cluster in Latvia. Clinical pathway will be designed with LASPEN, following ESPEN guidelines in alignment across participating hospitals and leading palliative care providers.
Phase 2 (next 6 months): deployment across participating hospitals and palliative care providers (piloting within at least 3 palliative care centres), incl. training of multidisciplinary mobile teams. Distributing access to the National Nutritional Care Dashboard (aggregated anonymised data of 200+ patients) and in the first 12 months we commit to share the evidence-based open API with depersonalised datasets for collaboration with EU researchers.
Phase 3 (next 12 months): Expansion to additional care settings (hospital & homecare); continuous data collection, monitoring, and benchmarking; dissemination and policy engagement. Target cohort for 24 months are at least 600 patients.

Resources & enablers

This project is led by the BirgerMind ICT development team in close collaboration with LASPEN and clinical partners including Magnum Social & Medical Care (MSMC), Rūre Palliative Care Clinics – the leading palliative care centers in Latvia and Baltics, Liepaja Regional Hospital, Latvia University of Life Sciences and University of Latvia. Clinical experts, dietitians, and multidisciplinary palliative care teams are already actively involved in pathway design, implementation, and evaluation, while the MNI grant is vitally important for implementing a standardised clinical nutrition pathway, as well as develop, securely host and pilot-test the PallNutri Connect digital platform.
Initial groundwork has been completed, including, access to retrospective depersonalised datasets (3000+ palliative patients), defined clinical data structure in alignment with GLIM, NRS-2002, MUST, SGA, ESPEN guidelines, ongoing preparation of technical infrastructure and deployment environment in accordance with GDPR, ISO27001:2022, and ICH-GCP standards. Allocation of MNI Grant 2026 (€40K): PallNutri Connect platform development and integration: €22,000 (clinical decision support system, patient/caregiver interface, secure infrastructure), Clinical implementation and training: €6,000 (across pilot centres), Tele-nutrition support and specialist consultations: €6,000, Data collection, monitoring and interim analysis (6-12 months): €4,000, Dissemination, publications & policy engagement: €2,000. This project is financially supported and strategically driven by the MSMC group.

Results, expected outcomes & impact

This national, multi-centre initiative introduces a practical, digitally enabled nutritional care pathway for palliative patients with a special focus on oncology cases, addressing a critical gap between clinical decision-making and real-life implementation. By combining clinician decision support with patient and caregiver engagement tools, PallNutri Connect ensures that nutritional care is continuously monitored, personalised, and actionable across decentralised care settings. To our knowledge, this is the first initiative in the Baltic region to integrate clinical pathways, patient-reported outcomes, and real-time monitoring into a unified digital ecosystem for palliative nutrition. The project is therefore both innovative and directly aligned with MNI priorities on implementation and measurable patient benefit. The platform will be embedded into routine workflows across participating hospitals and homecare services, enabling (a) standardised use of ESPEN-aligned nutritional care pathways, (b) integration of real-time decision support into clinical practice, and (c) continuous monitoring through a national anonymised dashboard.

With the successful implementation of this project, we expect an immediate ~15% reduction in unplanned admissions through improved nutritional care and monitoring, while the average cost of one unplanned hospital admission for palliative patient is around €1,500 and target cohort of 600 patients over 24 months, it would result in direct health-economic benefits of €135,000 for the national healthcare system, while further improving resource allocation across palliative and homecare services. Health-economic evaluation will be formally assessed at 24 months using cost-per-patient and cost-avoidance analysis. The platform is inherently scalable across the EU and Globally, supported by interoperability standards, such as HL7 FHIR, WCAG AAA, and a robust G11n globalisation framework, enabling effecting localisation, compliance, and seamless integration with existing systems.

Project results will be published in SCOPUS/WoS/DOAJ for high-impact clinical nutrition scientific audiences, and the evidence-based policy recommendations, consisting of (a) national palliative nutrition pathway, (b) proposal for digital nutritional care integration and (c) evidence on reduced hospitalisations along cost-benefit analysis will be submitted to Department of Healthcare, National Health Service, Centre for Disease Prevention and Control (SPKC) and Digital Health coordination units. Moreover, we aim to enrich our palliative care datasets over several years, ensuring opportunities for future EU-level initiatives and publications. Open, evidence-based API and depersonalised datasets will support EU-level research and replication.

X **Please tick to confirm the PEN letter of endorsement is attached. Incomplete submissions will not be considered.**