# Screening, Assessment, Diagnosis and Treatment of **Disease Related Malnutrition in a Telemedical** Supported Treatment Pathway for Chronic Wounds

Alexander Höller<sup>1,2</sup>, Hannah Vinatzer<sup>2</sup>, Angelika Rzepka<sup>2</sup>, Stefan Welte<sup>2</sup>, Bernhard Pfeifer<sup>3,4</sup>, Günter Schreier<sup>2</sup>

<sup>1</sup>Division for Nutrition and Dietetics, University Hospital Innsbruck, Tyrolean State Hospitals, Austria - alexander, hoeller@tirol-kliniken, at

<sup>2</sup>Digital Health Information Systems, Center for Health & Bioresources, AIT Austrian Institute of Technology, Graz , Austria

<sup>3</sup>Division for Digital Medicine and Telehealth, UMIT TIROL - Private University for Health Sciences and Health Technology, Hall in Tirol, Austria

<sup>4</sup>Tyrolean Federal Institute for Integrated Care, Tirol Kliniken GmbH, Innsbruck,



## **Description of the initiative**

Nutritional status is a relevant but severely under recognized factor in the context of treating chronic wounds. As impaired nutritional status is frequent in patients with chronic wounds and may negatively effect wound healing in various entities of potentially complex wounds such as pressure ulcer, diabetic foot ulcer and venous leg ulcer, systematic and standardized screening, assessment, diagnosis and therapy of risk for disease related malnutrition (DRM) should be integrated in routine care. A telemedical based approach enables a uniform, patient-centered and multidisciplinary approach promising superior outcome to standard treatment. A tele-dermatology treatment pathway for routine use in the Austrian healthcare system was already developed and we now aim to integrate procedures for screening, assessment, diagnosis and treatment of nutritional risk and further test the feasibility within the primary health-care setting in the Austrian region Styria comprising general practitioners, consultants, nurses and dietitians.

#### Planned activities & deliverables

Mo (Month) 1-3: conceptualization (define specific issues, requirements and user roles relevant to nutritional aspects); select eligible tools for screening and diagnosis of DRM; ethics committee submission. Mo 4-6: program required forms and define new user roles; integrate forms within the established pathway; Mo 7-9: pre-clinical testing and trouble shooting, latest ethics committee approval; Mo 10-12: problem-solving, training of clinical personnel; Mo 13-15: clinical implementation and piloting; Mo 16-21: execution of study protocol, technical support; Mo 22-24: lessons learned, data-analysis and writing of report. Mo 24ff: scientific publication. Overall we will 1) provide a tele medical pathway for routine care of patients with chronic wounds, comprising professional procedures for screening, assessment, diagnosis and treatment of nutritional risk; 2) integrate a report on nutritional risk and nutritional treatment to the pre-existing document (Telemonitoring-Episodenbericht) within the Austrian Electronic Health Record "Elektronische Gesundheitsakte, ELGA"; 3) Clinically test screening, assessment, diagnosis and treatment of DRM within a telemedical supported treatment pathway for chronic wounds.

#### Resources & enablers

Our project team unites competences from the fields of dermatology, clinical nutrition and digital health information likewise. Full support of our institutions and an already existing digitalized tele-dermatology treatment pathway to build on will facilitate the success of the present project. Successful implementation requires a user-friendly platform accessible to both, healthcare providers and patients. Integration with existing healthcare infrastructure, including electronic health records, is essential for seamless operation and compliance with regulations. Personalized treatment plans, multidisciplinary collaboration, and continuous quality improvement efforts ensure tailored care and optimal patient outcomes. Additionally, maintaining patient privacy, providing ongoing provider training and support, and promoting patient education and engagement are critical components for success. In total, we estimate that 500 hours of staff time (mainly technical development and support) will be funded by this grant.

### Results/outcomes & expected impact

After the clinical pilot study within our project, the clinical pathway will be maintained in clinical routine in the participating primary health-care centre in the Austrian region of Styria, regarded as model-facility. A roll-out to other centres and regions in Austria is highly desirable and will be aspired via promotion within the scientific community and between health-policy makers. As the Austrian Federal Ministry of Social Affairs, Health, Care and Consumer protection strongly emphasizes on eHealth, we anticipate strong political support and aim to use this platform to share our experience on a national and international level with experts in dermatology, clinical nutrition, digital health information and health politics, and thus also demonstrate and discuss its high transferability to international settings. Currently, there is a lack of established strategies to tackle DRM in the group of patients with chronic wounds in real life disease management. This often overlooked group will certainly benefit from this innovative treatment approach. Our unified, patient-centered and multidisciplinary approach, facilitated via telemedicine remains unique, at least to our knowledge.



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

