EARLY DETECTION OF TYPE 1 DIABETES IN CHILDREN: THE EDENT1FI EUROPEAN SCREENING INITIATIVE

Jurgen Vercauteren on behalf of EDENT1FI

Background:
Type 1 diabetes (T1D) can be detected in presymptomatic stages through islet autoantibodies. Early identification reduces the risk of diabetic ketoacidosis (DKA) and enables timely education, monitoring, and potential disease- modifying interventions. As screening expands, diabetes nurses are central to participant engagement, education, and continuity of care.

Aim:
To present the EDENT1FI project as a European initiative for population-based screening of early-stage T1D, highlighting its objectives, methodology, early results, and relevance for nursing practice.

Method:
EDENT1FI is a multidisciplinary research programme involving academic institutions, industry, and patient organisations across Europe. It aims to screen approximately 220,000 children for T1D-associated autoantibodies between 2023 and 2028. Screening is implemented in multiple countries using harmonised protocols, followed by structured monitoring of individuals identified with early-stage T1D. The programme integrates innovative screening and monitoring technologies and evaluates psychosocial, ethical, and economic aspects of screening. Data are collected in a central pseudonymised European registry to support research and care improvement. Nurses play a key role in participant engagement, sample collection, education, follow-up, and overall study implementation.

Results:
Over 100,000 children have been screened across multiple countries. Early- stage T1D was identified in children with (2.22%) and without (0.29%) a family history, supporting population-based screening. Most detected cases were in stage 1 or 2, enabling early education and monitoring before symptom onset. Screening has proven feasible across diverse healthcare systems. EDENT1FI is structured into six work packages addressing implementation, psychosocial impact, monitoring, disease interception, communication, and coordination. FEND 2026

Conclusion:
EDENT1FI demonstrates that large-scale, standardised early T1D screening is feasible and clinically relevant across Europe. For diabetes nurses, this represents a shift towards proactive, preventive care, expanding roles in screening delivery, patient education, and follow-up. Early detection offers opportunities to improve outcomes and advance person-centred diabetes care.

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Jurgen Vercauteren is a professor at KU Leuven and one of the the program managers of EDENT1FI, a groundbreaking initiative dedicated to early type 1 diabetes (T1D) detection across Europe. With a decade of personal experience living with T1D, Jurgen

is deeply committed to advancing prevention, early diagnosis, and awareness of the disease. As a strong believer in the power of early detection, he has had his three children screened for T1D, reinforcing his personal and professional dedication to the cause. His work with EDENT1FI focuses on creating a unified screening platform, refining biomarker-based detection methods, and designing personalized monitoring and follow-up strategies. The initiative also addresses psychological and socioeconomic impacts, develops innovative trial designs for disease-modifying therapies, and collaborates with key stakeholders including patients, healthcare professionals, and policymakers to integrate early T1D detection into healthcare systems across Europe. Alongside his leadership in EDENT1FI, Jurgen teaches biostatistics at KU Leuven and conducts research on public health challenges, aiming to shape the future of diabetes care.