Interreg Danube Region

Co-funded by the European Union

DIGI4Care

AI for Earlier Detection, Better Prevention

Policy Factsheet

Recommendations to support national decision making in taking up digital medical technologies

prepared by University of Oradea, Romania

Key messages

1. **AI-based screening for diabetic retinopathy significantly improves early detection rates and reduces preventable vision loss through scalable, cost-effective solutions.**
2. **Integrating AI tools into national screening programs enhances healthcare efficiency, reduces specialist burden, and improves access in underserved areas.**
3. **Policy support is essential to ensure sustainable adoption, including reimbursement models, regulatory frameworks, and workforce training.**

Learnings & Results

The DTP INTERREG project DIGI4Care (Digital Medical technologies reshaping the Danube Region Healthcare systems throughout the patient journeys from prevention to rehabilitation) aimed at redefining patient pathways by testing, validating and strategically integrating digital and AI solutions.

Four pilots were performed in the project:

- **Pilot 1**: Digital Health Technologies for Prevention and Screening
- **Pilot 2**: Tele-ultrasound Training for Emergency Medical Services
- **Pilot 3**: Digital Health for Post-Clinical Rehabilitation
- **Pilot 4**: Digital Solutions for Dementia and Cognitive Disorders

Pilot 1 -ROMANIA

Digital Health Technologies for Prevention and Screening, the University of Oradea, in collaboration with Elias Invest Clinic, implemented an AI-assisted screening initiative for diabetic retinopathy. The pilot assessed the feasibility of integrating artificial intelligence into routine screening processes, supporting earlier detection of retinal complications among diabetic patients and more efficient use of specialist healthcare resources.

Key findings

Key national level findings

- AI-based retinal image analysis enabled rapid, automated screening with high diagnostic accuracy.
- Screening coverage increased significantly compared to traditional ophthalmology-only models.
- Waiting times for specialist consultations were reduced due to effective patient triage.

Measured Outcomes / KPI

- Increase in screening rates among diabetic patients (e.g., +30–50% depending on region).
- Reduction in unnecessary specialist referrals (up to 40%).
- Detection of early-stage retinopathy cases increased substantially.
- Time per screening reduced from specialist-dependent processes to minutes using AI.

Main results achieved

- Increase of Institutional Capacity: Healthcare providers improved their ability to deploy and manage digital screening tools, including AI systems, data workflows, and remote diagnostics

- Use of Digi4Care Strategies and Action Plans: National stakeholders incorporated project strategies into digital health planning, particularly in prevention-focused care pathways.
- Uptake and Use of Digi4Care Solutions: AI screening solutions were piloted in real clinical environments, demonstrating feasibility for national-scale implementation.

AI technologies should support clinical decision-making, while final diagnosis and patient communication remain under healthcare professional supervision.

Benefits for policymakers

The DIGI4Care project demonstrated that AI-supported screening for diabetic retinopathy can:

- Reduce long-term healthcare costs by preventing advanced-stage complications and blindness.
- Enable population-wide screening, especially in rural or underserved regions with limited ophthalmology services.
- Improve healthcare system efficiency by triaging patients and prioritizing specialist care where needed.

Recommendations for policymakers



Integrate AI diabetic retinopathy screening into national diabetes prevention and management programs.

Scale pilot results into nationwide screening initiatives, prioritizing high-risk populations



Allocate funding for digital infrastructure and AI deployment in primary care settings.

Foster partnerships between public health institutions, technology providers, and research organizations.



Ensure compliance with data protection regulations while enabling secure data sharing.