University of North Dakota Secures up to $19.9 Million ARPA-H Award to Deploy a Decentralized Diabetes Data Platform

A team of industry leaders and the University of North Dakota are targeting the nation's $966 billion chronic disease burden

SafetySpect Inc

GRAND FORKS, ND, UNITED STATES, January 12, 2026 /EINPresswire.com/ -- The University of North Dakota (UND), in partnership with SafetySpect Inc., ComDel Innovation, and Edgewood Healthcare, have been received a highly competitive agreement totaling up to $19.9 million to transform the management of chronic conditions focusing on senior care with diabetes. Funded through the Advanced Research Projects Agency for Health (ARPA-H), the project introduces Edge4Care.ai, a decentralized AI platform designed to shift American healthcare from reactive treatment to proactive prevention. This is one of the most coveted and competitive awards provided by the federal government.

The award includes up to $16.9 million in federal funding alongside $3 million in industry matching funds, a critical validation of the technology's commercial viability.

"This project exemplifies what becomes possible when academia, industry, and care providers work as a unified innovation ecosystem," said Kouhyar Tavakolian, professor of biomedical engineering and director of the BioInnovation Zone (BiZ) at UND, and the principal investigator for the project.
"Together, we are translating cutting-edge research into real-world solutions that improve patient outcomes, reduce healthcare costs, and preserve independence for older adults."

The Economic Imperative to Address Chronic Disease

Chronic diseases cost the U.S. healthcare system more than $966 billion annually. Within this broader crisis, diabetes represents a particularly devastating burden: every three and a half minutes, an American loses a limb due to diabetes-related complications.

Each year, more than one million Americans develop diabetic foot ulcers (DFU), leading to over 130,000 amputations. Edge4Care.ai addresses this not just as a medical tragedy, but as an economic emergency. By shifting from symptom-based care to predictive precision health, the platform identifies wound risks before hospitalization is required, significantly reducing the need for costly acute interventions.

This initiative embodies ARPA-H's bold vision: to make prevention priority, to build technologies that act before illness strikes, and to dramatically reduce the need for emergency intervention altogether.

Technological Sovereignty: Edge vs. Cloud
Unlike conventional digital health tools that rely on centralized cloud servers, Edge4Care.ai utilizes a proprietary Edge Computing architecture. This "sovereign" approach processes data locally at the point of care, providing critical strategic advantages:
 Privacy by Design: Data never leaves the secure environment of the care facility, mitigating the risks of ransomware and data breaches associated with centralized systems.
 Rural Accessibility: By using technologies such as edge computing with advanced edge computing chips, the platform ensures advanced AI is accessible in rural and underserved facilities, directly bridging the digital divide.
 Explainable AI: The system interprets over 100 risk factors—including blood flow, tissue oxygenation, and gait patterns—instantly at the bedside. Crucially, the platform doesn't just score risk; it explains why a patient is at risk, highlighting the most influential factors to guide clinical decision-making.

"The 'silent pandemic' of diabetic complications requires a loud and sophisticated response," said Dr. David G. Armstrong, Distinguished Professor of Surgery and Neurological Surgery at the University of Southern California and a member of the clinical/scientific leadership team on the project. "By bringing the power of AI to the 'edge'—directly to the patient's bedside—we are finally bridging the gap between high-tech capability and high-touch care, ensuring that geography and mobility are no longer barriers to world-class limb preservation."

"While the goal is to develop the technology for diabetes complications, success will enable availability of important technology for federated data sharing, and model development and deployment, that could be used for countless conditions," said Kenneth Barton, CEO of SafetySpect Inc. "This will ensure advanced disease and health prediction models and improved health outcomes, decreased costs, and a decreased need for acute interventions throughout the medical system."

Alignment with Federal "MAHA" Policy

The initiative directly supports the Make America Healthy Again (MAHA) framework, which prioritizes technologies that preserve independence and prevent decline. By detecting early warning signals, Edge4Care.ai has the potential to prevent thousands of amputations annually and establish a scalable model for other chronic conditions, including heart disease and Chronic Obstructive Pulmonary Disease (COPD).

By uniting clinical science, AI innovation, and compassionate caregiving, the Edge4Care.ai initiative is not just predicting risk—it is redefining the future of chronic disease management in America, creating a foundation for federated, privacy-preserving data sharing across the healthcare system.

Consortium Expertise: A "Made in USA" Value Chain
The project unites complementary strengths across the innovation value chain made possible through the Senior Healthcare Innovation Consortium (SHIC) that is a national program with over 120 members from across America promoting senior healthcare innovation:

 University of North Dakota: Lead awardee providing academic rigor and predictive modeling oversight.
 SafetySpect Inc.: Lead technology innovator developing the AI platform.
 ComDel Innovation: Hardware manufacturing partner, contributing "Made in USA" and supply chain resilience.
 Edgewood Healthcare: Clinical deployment site and clinical validation partner.

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About University of North Dakota
The University of North Dakota is the state's oldest and largest university, driving innovation in research, healthcare, and technology. UND's commitment to addressing rural health challenges makes it an ideal lead institution for transformative federal health initiatives.

About SafetySpect Inc.
SafetySpect Inc. is a healthcare technology company specializing in edge-computing AI solutions for chronic disease management and food safety initiatives. The company develops advanced imaging, sensing, and machine learning platforms designed to bring predictive healthcare to the point of care and safeguard food supply chains.

About ComDel Innovation
ComDel Innovation is a technology manufacturing partner specializing in advanced healthcare hardware systems, providing "Made in USA" manufacturing and supply chain solutions for critical medical technologies.

About Edgewood Healthcare
Edgewood Healthcare operates a network of senior living communities and long-term care facilities committed to delivering innovative, high-quality care that preserves independence and dignity for residents.

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