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Contribute to a safer future for children

PROTECT-CHILD brings together European efforts to reduce complications in pediatric transplants through advanced research and data technologies.

VISION

The vision of PROTECT-CHILD is to become a leading reference in secure and ethical health data integration for pediatric transplants in Europe. By combining clinical, genomic, and real-world data, the project aims to drive personalized medicine, foster international collaboration, and create a sustainable data-sharing ecosystem that improves health outcomes and enhances the quality of life for children requiring transplants.

MISSION

The mission of PROTECT-CHILD is to enhance pediatric transplant outcomes by integrating clinical and genomic data through secure, privacy-preserving technologies. By fostering collaboration across Europe, the project aims to advance personalized medicine, improve patient care, and ensure ethical, data-driven innovations for children requiring life-saving transplants.

IMPACT

PROTECT-CHILD aims to transform pediatric transplant care through secure integration of clinical and genomic data, enabling personalized treatments and improved patient outcomes. By leveraging advanced technologies like AI, federated learning, and quantum computing, the project enhances data-driven research while ensuring privacy and compliance with EU regulations.

It bridges data gaps in rare pediatric transplants, advancing scientific understanding, fostering international collaboration, and informing

policy-making. Through its interoperable data ecosystem, PROTECT-CHILD empowers healthcare professionals, researchers, and policymakers, ultimately enhancing care quality and reducing treatment-related complications for children across Europe.

Technological and Research Infrastructure

PROTECT-CHILD leverages cutting-edge technology and a robust research infrastructure to securely integrate clinical and genomic data for pediatric transplants. Its architecture aligns with the European Health Data Space (EHDS), using interoperable standards like OMOP and FHIR. The project builds on the Genomic Data Infrastructure (GDI) and ELIXIR for large-scale data sharing and advanced analytics.

A federated learning framework ensures secure multi-party data processing, while AI-driven models support personalized medicine. PROTECT-CHILD employs EHDS Capsules for privacy-preserving data management, enabling seamless collaboration across EU hospitals. This integration fosters innovation, accelerates research, and advances data-driven healthcare while maintaining strict compliance with European data regulations.

Motivation in Numbers

The context of the project:

Pediatric transplants occur annually in Europe, but unmet needs persist

+ 0 k

Patients per day die while waiting for a transplant due to organ shortages

0

Countries collaborate within the TransplantChild ERN

0

Hospitals and institutions participate, ensuring broad clinical and research integration

0

Improving transplant outcomes through genomic data and personalized treatments

+ 0 %

Our Partners

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