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D10.10 – Project Website

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Abstract

This document provides an overview of the current status of the Protect-Child website. This tool will serve as the primary information hub for the project. It includes a detailed description of the website's current features and functionality, along with a summary of the future sections planned for development.

Statement of originality

This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both.

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1 About this deliverable

Deliverable D10.10 of the Protect-Child project marks the successful deployment of the official project website, a key communication and dissemination instrument designed to engage a broad range of stakeholders. Established according to the project's dissemination strategy and meeting the requirements set forth during the initial phases, this website provides a central hub of accessible and regularly updated content. Its primary purpose is to inform audiences—including patients, families, healthcare professionals, researchers, policy-makers, and industry representatives—about the project's objectives, methodology, achievements, and consortium partners.

The website hosts general project information, including the rationale behind integrating genomic and clinical data to improve pediatric transplantation outcomes, and outlines the roles and expertise of the multidisciplinary consortium. Emphasizing transparency and openness, it makes non-confidential deliverables and materials publicly available, reflecting the project's commitment to accountability and alignment with European Commission guidelines. In addition, it highlights the support received under the European Union's funding framework, contributing to the project's credibility and establishing trust with external audiences.

A cornerstone of the website's communication approach is the readiness to evolve with the project's progress. Over time, dedicated sections—such as forthcoming "News" and "Results" pages—will provide timely updates on advancements, share insights from external advisory teams, and showcase emerging deliverables such as open-source software tools and best-practice guidelines. By doing so, the website ensures continuous stakeholder engagement, fosters knowledge exchange, and supports the wider adoption of project outcomes.

In conclusion, D10.10 represents a significant milestone in the Protect-Child project, having successfully launched an online presence that meets the communication objectives set in the initial plan. The website not only serves as a high-impact dissemination platform but also strengthens stakeholder trust and involvement. As the project matures, this digital resource will remain central to sharing progress, facilitating collaboration, and ultimately contributing to enhanced care and improved outcomes in pediatric transplantation across Europe.

1.1 Deliverable context

Table 1. Deliverable context

Project item in the DoA	Relationship
Project Objectives	Supports dissemination of project outcomes to stakeholders.
Exploitable Results	Showcases and promotes the project's results.
Workplan	Central to WP10 for communication and dissemination tasks

Milestones	Aligns with MS4, ensuring dissemination infrastructure readiness
Deliverables	This deliverable is strongly related to T10.1, T10.2 and T10.3
Risks	The main risks for the project website are technical issues, security breaches, compliance failures.

2 Introduction

The Protect-Child project is a Europe-wide initiative aimed at improving the outcomes of pediatric transplantation by harnessing the power of genomic data, advanced analytics, and interdisciplinary collaboration. As part of the early-stage efforts, a comprehensive multi-channel communication plan (D10.1) has been implemented to ensure that the project's objectives, methodologies, consortium partners, and non-confidential materials are disseminated widely and transparently. Central to this plan is the project's website (D10.10), serving as a key platform to reach thousands of citizens, healthcare professionals, health IT enterprises, and policymakers across Europe. This platform not only highlights the support of the European Commission, reinforcing the project's credibility, but also integrates guidance and recommendations from external advisors made available through a dedicated section. Their independent assessments provide an essential layer of quality assurance, ultimately increasing the project's potential for success. By adopting this open and inclusive communication strategy, the Protect-Child project aligns with European research standards and fosters a collaborative environment conducive to lasting improvements in pediatric transplantation care.

3 Website current structure

The website's header features a clean, minimalist design with a predominantly white background. On the left side, there is the Protect-Child logo that appears to combine a stylized hand icon with multicolored dots and the text "protectChild." This logo likely represents the brand identity of the organization or initiative the site is associated with.

To the right, a navigation menu provides straightforward access to the site's main sections. The menu options—"HOME," "PILOTS," and "RESOURCES"—are laid out horizontally in simple, black, uppercase text. Each of these may have dropdowns or subpages, as indicated by the small arrows next to some of them.

On the far right, a prominent black "CONTACT" button stands out visually against the otherwise white background. Its contrasting color and rectangular shape are likely designed to draw immediate attention, making it easy for visitors to locate and access a contact form or page.

Overall, the header design is streamlined and user-friendly, focusing on clarity and ease of navigation.

The initial Protect-Child website (www.protect-child.eu) structure is aligned with the main menu of Figure 1.

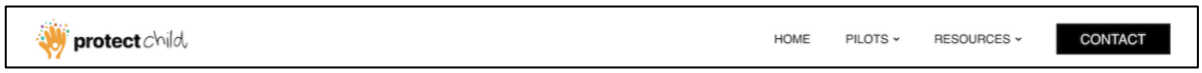

Figure 1. Website main menu

3.1 Home page

The Protect-Child home page (Figure 2) is structured to provide visitors with a clear, immediate understanding of the project's purpose and goals. At the top, a prominent hero section presents a strong visual element—a child patient alongside medical professionals—accompanied by a succinct tagline that encapsulates the project's aim of improving pediatric transplant outcomes through genomic data integration. Directly beneath this, a concise introductory statement explains how Protect-Child leverages cutting-edge technologies, secure healthcare solutions, and privacy-preserving data integration to advance personalized medicine and reduce complications in pediatric transplants across Europe.

As users scroll down, they encounter a focal message encouraging participation in "building a safer future for children." This statement sets a collaborative and forward-looking tone, explaining that Protect-Child unites European efforts to enhance patient outcomes through advanced research and data-driven innovations.

The homepage then highlights three key pillars of the project's ethos: **Mission**, **Impact**, and **Vision**. Each pillar is featured in its own section, with clearly delineated text blocks providing in-depth details.

- The **Mission** section outlines the project's core objective: improving pediatric transplant procedures by integrating clinical and genomic data in a secure and ethical manner.
- The **Impact** section describes how Protect-Child aims to transform patient care by utilizing privacy-preserving technologies and advanced analytics (such as AI, federated learning, and quantum computing) to enable personalized treatments and expand scientific understanding.
- The **Vision** section presents a longer-term aspiration—establishing a sustainable, data-sharing ecosystem that becomes a reference point in Europe for secure pediatric transplant healthcare integration.

Figure 2. Protect-Child Home page

Future iterations and releases of the website are expected to disseminate additional information and enrich the user experience. For instance, updated sections may include:

- **Pilots and Case Studies**: Showcasing real-world implementations of the platform's methodologies in clinical settings.
- **Resources**: Offering access to publications, guidelines, informational materials, and training content for healthcare professionals, researchers, and policymakers.
- **News and Events:** Providing timely updates on project milestones, scientific meetings, workshops, and symposiums to keep the community informed.
- **Results and Outcomes:** Sharing data insights, improvements in transplant success rates, and testimonials or stories from stakeholders.
- **Collaborations and Partnerships:** Highlighting the network of hospitals, research institutions, and industry partners that support Protect-Child, as well as opportunities for new collaborations.

In essence, the current homepage sets the foundation by conveying the project's core purpose and methodology, while future expansions will offer more dynamic, data-rich content and interactive features that illustrate how Protect-Child's work translates into tangible benefits for children, their families, and the healthcare community.

3.2 Pilots page

The Pilots page (Figure 3) of the Protect-Child project presents a structured and informative overview of the initiative's goals, ongoing work, and anticipated impact on pediatric transplantation. At the top of the page, a visually striking hero section immediately conveys the core mission: integrating genomic and clinical data from pediatric transplant patients. The accompanying imagery—such as healthcare professionals examining data and comforting a young patient—reinforces a humane, patient-centered approach. This initial segment also highlights that the pilot currently involves the genomic analysis of data from 200 pediatric transplants, illustrating the scope and precision with which researchers are tackling the field's challenges. A call-to-action button labeled "Clinical Study" suggests that more in-depth scientific information, including methodologies and protocols, is accessible for those who wish to delve deeper.

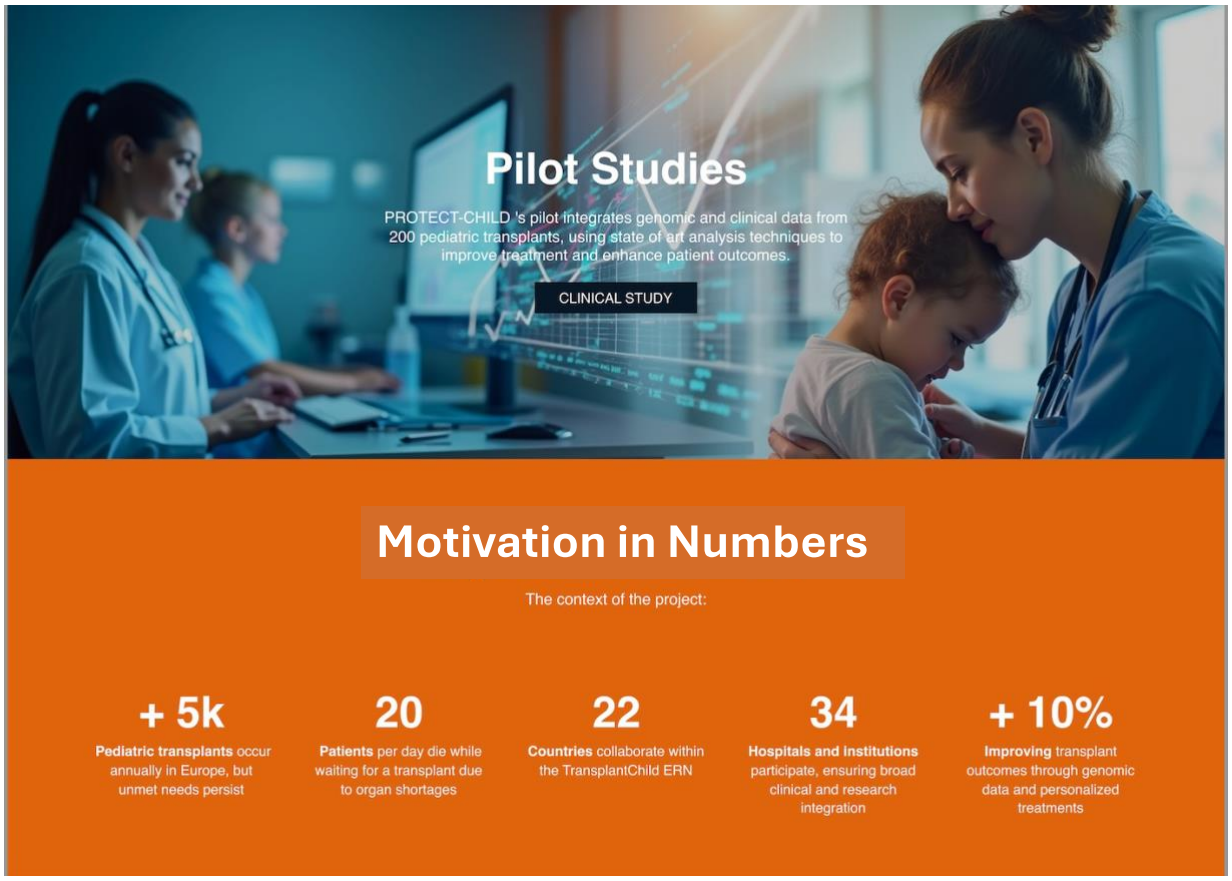

Figure 3. Protect-Child Pilots page

Scrolling down, the page shifts from general aims to concrete evidence underscoring the project's motivation. A section encapsulates key statistics to contextualize the urgent need and potential benefits of the work. These figures note that over 5,000 pediatric transplants occur annually in Europe, while around 20 patients die each day awaiting these life-saving procedures. Such data highlight both the scale of the problem and the dire consequences of organ shortages. The page also details the project's extensive collaborative framework—22 countries currently participate through the TransplantChild European Reference Network (ERN), and 34 hospitals and institutions contribute, ensuring a broad interdisciplinary exchange of clinical expertise and research findings. The page concludes by projecting a tangible gain in outcomes using genomic data and personalized treatments, hinting at a possible improvement of more than 10%.

Though the Pilots page already sets a clear and persuasive narrative, it also alludes to future expansions. As the project evolves, we can anticipate that the page will be updated to include more intricate methodological explanations, detailing precisely how genomic and clinical datasets are integrated and analyzed to yield actionable insights. Preliminary findings, once validated, are likely to be shared to demonstrate what has been learned and which approaches prove most effective. This might involve summaries of patient outcomes, anonymized case studies to illustrate practical benefits, and guidelines or best practices that clinicians can adopt.

Over time, the page may also showcase the various institutional partners, highlighting their expertise and the multidisciplinary nature of this collective effort. Technological

advancements, such as data analysis pipelines, artificial intelligence-driven tools, and sophisticated bioinformatics solutions, are expected to be introduced, offering stakeholders a glimpse of the innovative methods fueling the project's progress.

In this way, the Pilots page does more than simply present the Protect-Child project's current state. It engages visitors, provides meaningful context, and sets expectations for the future. As the research advances, the page will likely evolve into a richer platform that not only informs but also inspires, guiding medical professionals, researchers, and policymakers in their pursuit of improved outcomes for pediatric transplant patients.

3.3 Resources

The Resources page (Figure 4) of the Protect-Child project is designed to highlight the technological and research backbone that supports this ambitious initiative. At its core, the page conveys how the project's infrastructure is purpose-built to integrate, manage, and analyze clinical and genomic data on a large scale—particularly within the European healthcare context, where interoperability and strict data protection measures are paramount.

The page opens by foregrounding the cutting-edge nature of the underlying technology and the robust research frameworks employed. It explains how the infrastructure aligns with the European Health Data Space (EHDS), referencing standards such as OMOP (Observation Medical Outcomes Partnership) and FHIR (Fast Healthcare Interoperability Resources). By doing so, the content signals that the project's data-sharing and analysis protocols do not exist in a vacuum; rather, they are harmonized with established, widely recognized standards. The mention of the Genomic Data Infrastructure (GDI) and ELIXIR networks further emphasizes that the Protect-Child project is leveraging high-level, internationally coordinated efforts to ensure secure, compliant, and efficient data flows.

Central to the discussion is the concept of a federated learning framework. This framework ensures that sensitive data can be processed and analyzed collaboratively across multiple hospitals and institutions without the need to centralize raw data in a single repository. In other words, the infrastructure supports "learning at the edges," where models improve by training on distributed data, thereby respecting patient privacy and adhering to stringent European data protection regulations. The page also highlights how AI-driven methods—intelligent analytics models, privacy-preserving capsules, and cutting-edge informatics—contribute to personalized medicine, offering potentially transformative improvements in patient care.

Figure 4. Protect-Child Resources page

As the project matures, it is reasonable to anticipate that the Resources page will expand to include more practical, hands-on information. Future updates could include detailed documentation explaining how participating centers can engage with the data infrastructure or implement federated learning protocols. Technical white papers may be released to delve into the specifics of AI models, data governance tools, and interoperability standards. There may also be opportunities to share best practices derived from real-world experiences, offering step-by-step guides, training materials, and tutorials that help clinicians, researchers, and IT teams navigate this complex ecosystem.

Moreover, as the project's community of practice grows, the Resources page might serve as a hub for knowledge exchange. This could mean showcasing code repositories, open-source tools, or reference implementations, as well as providing links to collaborative platforms where stakeholders can ask questions, share insights, and contribute to ongoing refinement of the infrastructure. Updates might also outline how new data types or emerging interoperability standards are integrated, ensuring that the infrastructure remains at the cutting edge of biomedical informatics.

In short, the current Resources page sets the stage by emphasizing a robust, secure, and compliant technological foundation. Over time, it is likely to become a more interactive and instructive environment, providing stakeholders with the resources, guidance, and community support they need to fully leverage the Protect-Child project's advanced capabilities in service of improving pediatric transplant outcomes.

3.4 Contacts

On the current Contact page of the Protect-Child project (Figure 5), the content focuses on introducing the partnership network and providing a straightforward means of getting in touch. The page prominently displays the logos of the various institutions and organizations collaborating within the project. Positioned near the top, these logos represent universities, hospitals, research centers, and technology companies working together under the Protect-Child umbrella. The visual arrangement underscores the breadth and diversity of the consortium, sending a clear message of a multi-disciplinary and international effort. Accompanying these partner logos is a short introductory text—currently in placeholder ("lorem ipsum") format—indicating that more descriptive content about the partnership will be provided later. At the bottom of the page, visitors find a designated contact address, making it easy for those interested in the project—be they researchers, potential collaborators, or members of the public—to reach out for more information. There is also a visible acknowledgment of the European Union's Horizon 2020 funding, along with the project's grant agreement number, underscoring that Protect-Child operates within a structured European research framework and meets its associated standards of quality and transparency.

Figure 5. Protect-Child Contact page

As the project matures, this page is expected to evolve significantly. Future releases will likely replace the placeholder text with a more detailed narrative that explains each partner's role, expertise, and the value they add to the project. Beyond listing contributors, the page may include:

- **PERT Diagram:** Visualizations of the project's timeline, dependencies, and milestones. A PERT chart would help stakeholders understand how the project's many tasks fit together, when certain outputs are expected, and how delays in one area might impact other components.

- **Work Package (WP) Descriptions:** The project's objectives, tasks, and deliverables are typically organized into Work Packages. These structured units of activity will likely be outlined, detailing the scope, key outcomes, and responsibilities of each partner institution. Such information will clarify how the consortium's collective work is divided, managed, and guided toward achieving the overarching goals of Protect-Child.
- **Project Governance Details:** A clearer picture of how the project is administered, including decision-making processes and management bodies, will probably be made available. This could involve organizational charts showing steering committees, advisory boards, or leadership roles. Explaining the governance model ensures transparency and helps external audiences understand how strategic decisions, resource allocations, and conflict resolutions occur within the consortium.

While the current Contact page and partner listing primarily serve to identify key collaborators and provide a simple point of inquiry, future additions will likely transform it into a more comprehensive resource. It will function as a roadmap, illustrating not only who is involved but also how the consortium operates, manages its resources, and progresses toward its clinical and scientific objectives.

4 Future sections

This section presents forthcoming enhancements to the Protect-Child project's online platform that will enrich communication, transparency, and engagement. Two key additions are envisioned: news and results.

4.1 News

The introduction of a dedicated "News" section on the Protect-Child project's platform would serve as a dynamic communication channel, enabling stakeholders to stay informed about recent developments, milestones, and ongoing activities in a timely and engaging manner. Rather than relying solely on static, formal pages, this section would allow the consortium to share fresh insights, highlight research progress, and promote collaboration across the European healthcare and research landscape.

Within the "News" section, the project team could publish regular updates on key achievements, such as successful pilot outcomes, noteworthy data integrations, or the release of new research tools. Coverage of important events—conferences, workshops, and expert panels—would provide an insider's look into the project's contributions to the broader discourse on pediatric transplant care. By offering summaries of talks, highlighting partner institutions' presentations, and linking to related materials, the project can amplify its visibility and thought leadership.

Moreover, the "News" section can serve as a bridge to the wider European community by circulating relevant information from related EU initiatives, policy developments, and emerging technological standards that may impact the project's infrastructure and practices. Regular posts could spotlight collaborations with other networks, feature interviews with domain experts, or discuss the implications of new data protection regulations. By framing Protect-Child's work within a larger European context, the project underscores its alignment with continental research priorities and fosters a sense of shared purpose.

In this way, the "News" section transcends mere announcements. It becomes a living, evolving narrative of the project's journey, inviting audiences—clinicians, researchers, policymakers, and patient advocacy groups—to learn from and engage with the initiative. Over time, as the repository of published content grows, it will serve as a valuable historical record, enabling newcomers to trace the project's evolution, celebrate its successes, and understand how Protect-Child contributes to a stronger, more innovative framework for pediatric transplantation across Europe.

4.2 Results

Introducing a dedicated "Results" section to the Protect-Child project's platform would significantly enhance its transparency, outreach, and impact. By curating all publicly shareable outcomes—ranging from formal deliverables and open-source software packages to published research, datasets, and other key achievements—this section becomes a central resource for stakeholders, collaborators, and interested parties from both within and beyond the consortium.

A “Results” page offers several benefits. First, it provides direct access to public deliverables, such as reports, guidelines, and white papers. By making these materials readily available, the project not only meets requirements for openness and accountability—often expected in EU-funded initiatives—but also facilitates knowledge transfer. Stakeholders, including clinicians, researchers, and policy-makers, can easily find and reference these deliverables for their own work, fostering synergy and strengthening the broader research ecosystem.

Open-source software and analytical tools can also be highlighted in this section, encouraging wider uptake and reuse. Sharing code, methodologies, and algorithms allows other researchers and institutions to build upon the project’s innovations, adapt them to their local contexts, and potentially contribute improvements back to the community. This dynamic exchange of resources accelerates the pace of discovery, drives continuous refinement, and helps ensure that Protect-Child’s work persists long after the initial project period.

In addition, posting achievements—such as clinical improvements observed, results from pilot studies, or new scientific publications—helps underscore the project’s real-world impact. Showcasing such outcomes in a dedicated, easily navigable area makes it clear how Protect-Child’s efforts translate into meaningful advances in pediatric transplantation and healthcare practice. Over time, the “Results” section becomes a repository not just of static documents, but of the project’s evolving legacy: a timeline of progress, benchmarks, and contributions that can inspire confidence in potential funders, attract new collaborators, and inform future research directions.

In essence, the “Results” section consolidates, streamlines, and amplifies the project’s outputs. By doing so, it strengthens Protect-Child’s role as a transparent, productive, and forward-looking initiative in the European biomedical landscape.

5 Website specifications

To ensure that the Protect-Child website adheres to the highest standards of privacy, security, usability, and accessibility, it is essential to define a clear set of technical and design specifications. This chapter outlines the key considerations that guide the development and maintenance of the project's online presence. It addresses compliance with the European Union's General Data Protection Regulation (GDPR), ensuring robust data protection and transparency practices. It also details the integration of essential security measures, such as SSL certification, to safeguard user information and validate the website's authenticity.

Beyond regulatory compliance and security measures, the chapter also focuses on usability and accessibility principles. By adopting user-friendly design standards, incorporating responsive web design practices, and aligning the website's visual elements with Protect-Child's brand identity, the online platform will offer an intuitive and consistent browsing experience to all visitors. This includes the potential use of multilingual options within the Pilot Sites section to reach local audiences more effectively.

In sum, this chapter lays the groundwork for creating an online resource that not only meets legal and ethical obligations but also ensures an engaging, inclusive, and secure environment for all users.

5.1 General Data Protection Regulation

The website is hosted by ARSYS [1] and managed by UPM as responsible of the site. Protect-Child consortium considers the privacy and security data crucial, even more as the project will be handling directly user's data from several European countries. In this respect both the Privacy Police and the Legal Notice statements will be visible in any page of the website and prepared according to the GDPR guidelines provided by the EC [2].

Additionally, the Secure Sockets Layer (SSL) certificate is currently in use [3]. Its main purposes are to confirm the identity of the website's owner and to encrypt all data transferred between the site and its visitors. This includes securing the public key used for encryption, information about who issued the certificate, and any subdomains linked to the main site. In other words, the SSL certificate ensures that both the website's legitimacy is established and that any exchanged information remains confidential.

5.2 Usability and accessibility

We will incorporate user-friendly design principles and clear interaction guidelines to help visitors navigate the website with ease. At the same time, the Protect-Child brand's visual identity will be carefully integrated, ensuring a consistent look and feel, including the use of familiar elements such as graphs, maps, infographics, and timelines. By employing a responsive web design approach, the website will automatically adapt its layout to various screen sizes and devices—from desktops and laptops to tablets and smartphones—improving accessibility, user engagement, and overall satisfaction. Research has shown that responsive design not only boosts user experience and encourages longer visit durations, but it can also lead to better search engine rankings. For further insights on best

practices in responsive and user-centered web design, consider reviewing guidelines provided by the W3C Web Accessibility Initiative (WAI) [4].

The main language of the project will be English. Multilanguage option will be evaluated for the Pilot Sites section so the audiences at local level can understand the experiments and promote the recruitment purposes. Protect-Child website will be used just for external communication purposes. The Protect-Child Consortium is already using the GoogleDrive tool as project repository for sharing information at internal level.

6 Conclusions

The Protect-Child website's launch under Deliverable D10.10 fulfills a crucial early project milestone, establishing a strong communication and dissemination foundation. By providing clear, accessible information on objectives, methodology, partners, and publicly available materials—while highlighting European Commission support—the site ensures transparency and encourages stakeholder engagement. As the project progresses, the website will evolve, integrating additional sections, news updates, and results, ultimately strengthening knowledge exchange and fostering broader impact on pediatric transplantation practices and policies throughout Europe.

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