

The European Paediatric Translational Research Infrastructure to foster research on paediatric medical devices

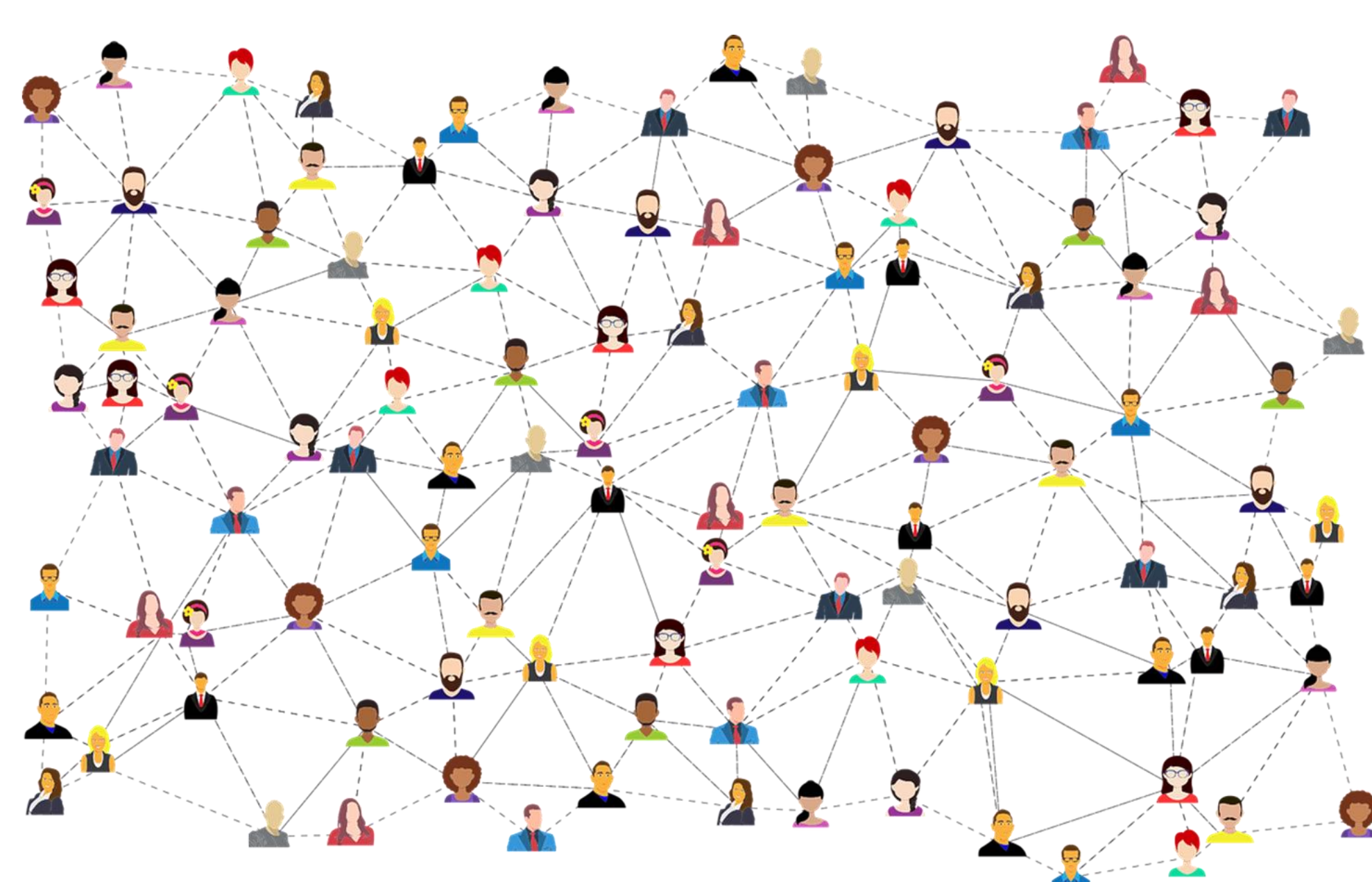
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Background

- **Few** medical devices (MDs) are designed for children → most are **borrowed from adult** applications and used **without a specific** indication.
- Designing paediatric medical devices can be challenging → children are **smaller** and **more restive** than adults
body structures and functions **change** throughout childhood
children may be **long-term device users** bringing new concerns about device **longevity** and **risks**.

Aims

The **European Paediatric Translational Research Infrastructure** (EPTRI) is working to establish thematic research platforms on several areas related to the discovery and development of paediatric drugs and **medical devices** to **foster** research in these fields and **accelerate the access** of paediatric patients to **tailored** drugs and devices.



Methods

- Development of online questionnaires to **map paediatric research facilities and expertise** throughout Europe
- Surveyed Areas: Paediatric Medicines Discovery, Paediatric Biomarkers and Biosamples, Developmental Pharmacology, Paediatric Medicines Formulations, **Paediatric Medical Devices**
- Timeline: **April 2018** and **November 2019**
- Answers: **More than 300 key scientists** in preclinical and translational paediatric research

Results

27 research units from **24 Institutions** based in **12 different countries** (particularly in **UK, Italy** and **Germany**) described their competence in medical devices research.

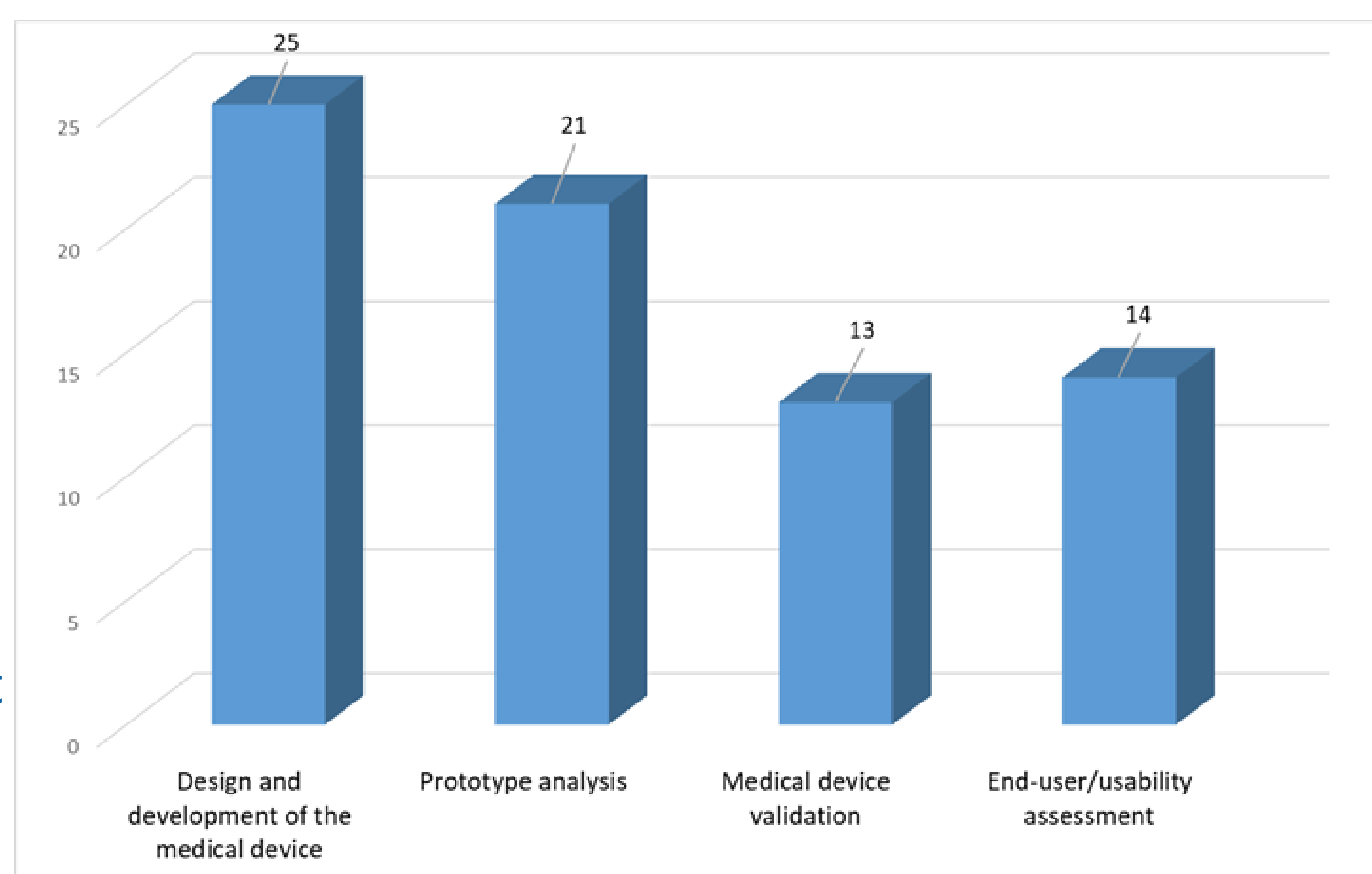
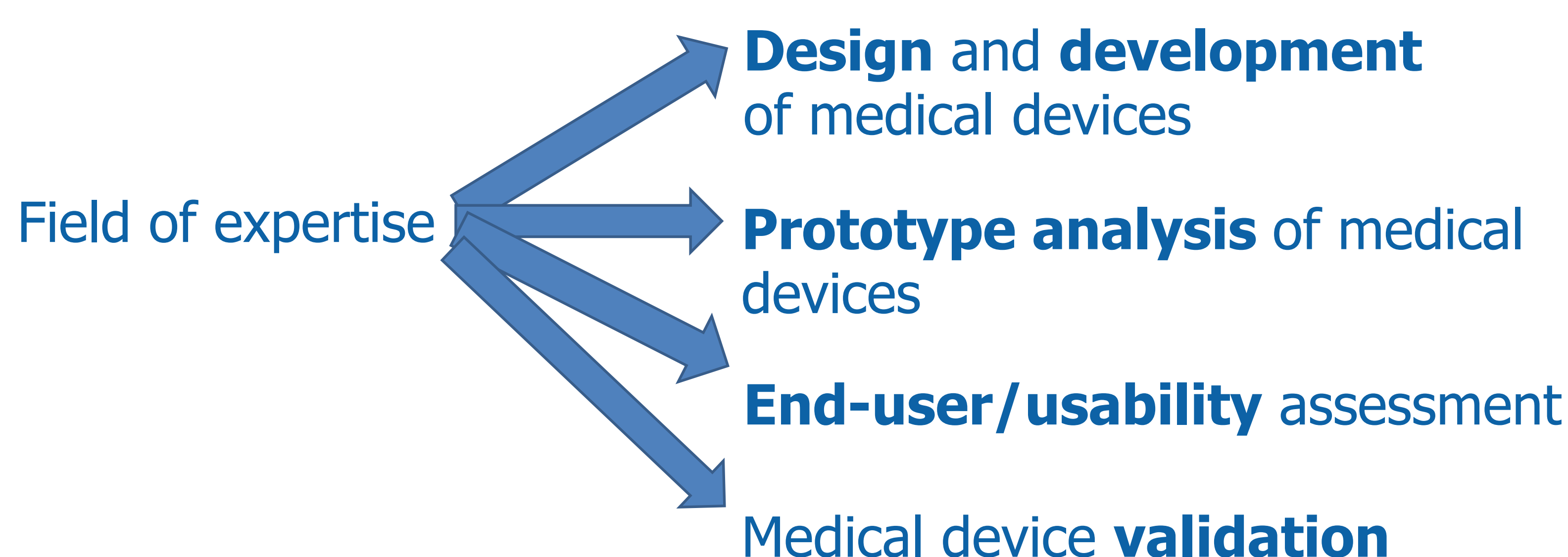




Figure 1: Distribution of respondents among the fields of expertise in medical devices

Discussion

A large gap exists between **the idea, the development and the clinical application** of medical devices in the paediatric population, due to physiological and ethical issues and the development costs. EPTRI will unite the identified MDs experts and will work to further map and **expand** this critical mass of specialists through advanced networking actions. This will allow EPTRI to provide services to the scientific community for developing tailored MDs to paediatric populations and to help overcoming the gaps and needs in MD research, **keeping pace** with evolving technologies and innovations.



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EPTRI
EUROPEAN PAEDIATRIC TRANSLATIONAL RESEARCH INFRASTRUCTURE