# Accessibility in Rare Disease Paediatric Clinical Trials

**Approximately 360 million people globally are living with a rare disease. Over half of these are children. Many of the diseases are life threatening and only 5% have an approved treatment. Trials in rare diseases are typically conducted at fewer sites, are longer in duration and are more frequently terminated than trials with more common indications.[1] While there is continued growth in the development of drugs to treat rare diseases, clinical trial accessibility for patients remains challenging due to the requirements inherent in these studies.**

**Participation in a paediatric rare disease trial involves not just the child, but the whole family and may be the only potential treatment available. It is critical to consider the experience of the child and their caregivers not only at the beginning but also throughout the study, which can be many years in length.**

**There are physical and logistical, financial, and psychological and emotional pressures that come into play when participating in a clinical trial.**

**Physical and Logistical**

Most patients with a rare disease already visit specialists on a regular basis. Participation in a clinical trial requires additional travel, time away from school and work and the need to arrange other family care while away from home. Depending on the trial site location, families may travel significant distances by car, train or air. Air travel can be particularly challenging due to the length and discomfort of the journey and difficulty accommodating wheelchair bound travellers.

Rare disease trial sponsors frequently employ organisations that specialise in the provision of patient travel support during trials. These organisations can coordinate travel to meet the specific requirements of each family taking into consideration work and school commitments for parents and children, respectively.

These organisations can also work with trial sites to ensure that specific accommodations meet the needs of patients during site attendance. This may include the selection of residential style lodging with suitable patient and family accessibility located near the study site.

Study site accommodations should include a child-friendly environment for entertainment for the patient and additional space for siblings if they are attending. For those sites without sufficient space, these travel support services could arrange alternative facilities for waiting and caring for patient siblings.

**Financial**

Families incur additional costs and not all expenses are reimbursed, such as loss of a parent's wages to attend study visits. Often parents are expected to pay up front for trial related expenses and submit receipts which can be inconvenient and burdensome.

Additional expenses can include care for siblings, pets and in some cases elders while primary carers are away from home.

To address some of these financial barriers, trial sponsors should incorporate anticipated patient costs into the clinical study budget allowing for stipends before costs are incurred. Support services can include provision of renewable gift cards and serve as a central point of contact to help manage patient expenses.

**Psychological and Emotional**

The emotional impact on children with rare diseases and their families is noteworthy. The requirements for participation in a clinical trial add to time away from home, school and work. Children often fall behind in school and the pressures to balance work, caregiving and the logistics of attending study visits, often far from home, are challenging. Siblings are commonly affected as all of this disrupts the family's routine.

Sponsors can reduce some of these burdens by incorporating decentralised elements into their trial design resulting in a reduced number of on-site visits. Home health nurses can often conduct study procedures at the patient's residence or school. Identifying which study activities can take place remotely, such as follow up communication through telemedicine, can further reduce the inconvenience and disruption to participants and their families.

Patient advocacy groups can be a good source for education and connecting families with similar experiences. Provision of counselling services and support groups for siblings can also help support patients and their families.

**Patient Insights**

Previous research on paediatric rare disease patients and their caregivers has described some of the key motivating factors for participation in a clinical trial. In 2021, we conducted an online survey through email and social media outreach to North American Rare Disease patient communities. Respondents included (n=126) patients with 69 different rare diseases. Thirty-seven percent (37%) of survey respondents (n=46) reported they had taken part in at least one clinical trial; however, only 67% reported that they had received any participation support services, such as travel support or financial assistance. Of those who did receive participation support services, 71% reported that these services somewhat or definitely impacted their ability to participate in and complete the trial(s).

Satisfaction with the services provided was significant. Approximately half of the survey respondents indicated they were very satisfied with the services they received. Overall, 84% of survey respondents, including those who had and had not participated in a trial, stated that receiving participation support services would somewhat or definitely impact their ability or willingness to take part in a future trial. A key implication is that participation support services are highly relevant to reducing risks to the efficiency of rare disease clinical trials in areas such as enrolment and retention, and the resulting timeline delays.

**Patient Journey**

The following illustrates a representative patient journey and some of the challenges that had to be overcome to participate in a study. The family in this example had a daughter with a rare disease involving severe neurological complications.

The daughter experienced frequent status seizures that were difficult to control and required emergency treatment in a hospital. The solution employed by a travel coordinator was to customise the route from their home to the study site to ensure they remained close to a hospital along the way as well as to notify them of any route delays or problems during their trip to the site. This allowed for rapid access to appropriate care, if needed.

Despite this support, there were problems being reimbursed for travel expenses. Because only one parent could travel with the child, it was often not possible to obtain receipts. The reimbursement process required the parent to save receipts from the gas station. The parent could not leave the child alone and outdoor payment systems were unable to dispense receipts resulting in substantial out of pocket travel costs.

In addition, this parent, who was the primary day time caregiver for all children in the family, had experienced trouble getting care for her daughter's siblings. As a result, the family had to make local arrangements for childcare and these expenses were not part of the reimbursement plan for study participants. These financial constraints may have deterred the participation of other patients and families. Earlier consideration of these significant obstacles and incorporation of these into the reimbursement plan would have eased this burden on this family.

**Conclusion**

Participation in paediatric rare disease trials can be burdensome for patients and their families as it requires significant commitment but is sometimes the only potential for a treatment. There are numerous physical, logistical and financial challenges, in addition to substantial psychological and emotion impact on child participants and their families.

Many of these barriers to trial access can be lessened by taking the perspective of the patients and their families to understand their journey at the outset. By incorporating their experience, support services to make it easier for them to participate in a clinical trial can be tailored to their needs. For this to be successful, it is critical that all stakeholders including product developers, researchers and advocacy groups are engaged in this process.

**REFERENCES**

1. Bell SA, Tudur Smith C. A comparison of clinical trials in rare versus non-rare diseases: an analysis of ClinicalTrials. gov. Orphanet J Rare Dis. 2014; 9: 170. doi: 10.1186/s13023-014-0170-0

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