**Title:** *Research exposure in UK paediatric training: how do we address the gaps. Experience from the London REACH network*

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**ABSTRACT**

Trainee-led Research Networks (TRNs) can mitigate against the lack of in-training academic opportunities by offering research experience, support and shared learning for paediatricians. The London REACH (Research, Evaluation & Audit for Child Health) Network, founded in 2021, has grown to involve a diverse group of 190 volunteer members at 28 London hospitals. Planning and delivery of a range of multi-site projects brings many challenges but also a wealth of learning opportunities relating to research and quality improvement as well as leadership, management, education and fostering an accessible and equitable research culture. TRNs are an effective and valuable tool in improving the experience of trainees.

**MAIN TEXT**

**Introduction**

Research lies at the heart of modern medicine, advancing practice and improving individual and population health. It is increasingly recognised that we must integrate clinical research with practice for relevant outputs that progress equitable healthcare[1]. Patient participation in research has been shown to be beneficial beyond the intended effects[2]. The Academy of Medical Sciences recently highlighted the value to population health and prosperity that child health research confers[3]. However, concerning reports from the RCPCH indicate a shrinking senior academic paediatric workforce, with only 5.4% of respondents to the 2022 RCPCH UK census reporting research involvement[4].

UK paediatricians can pursue clinical or academic training pathways. Academic training posts are centrally funded by the National Institute for Health and Care Research (NIHR) and allocate 25% of training time to research, but are very limited in number and therefore highly competitive[5]. Clinical paediatric trainees must usually take time out of programme (OOP, similar to a sabbatical) in research fellow roles to gain equivalent research competencies. Over a decade ago, the 2012 RCPCH Turning The Tide report highlighted the urgent need for increased provision of research experience within paediatric clinical training[6,7]. Alongside stipulations from the GMC’s Generic Professional Capabilities Framework, the Gold Guide, and the recently refreshed RCPCH Progress+ curriculum, there is a clear mandate for academic provision and research involvement for all paediatric trainees[8–10]. The RCPCH has embedded Regional Academic Representatives to support trainees seeking academic experience. Despite this, there are numerous challenges to achieving the vital research competencies required for training progression. Constraints on protected time, lack of experienced academic supervisors, poor transparency of available opportunities, rotational training, and the constant pressures of service provision have all led to an apparent deprioritisation of research culture within training[5]. Reports indicate that 89-95% of trainees want more academic exposure, but are restricted by current provision[11,12].

Of the various measures to improve the quality, quantity and accessibility of academic activities with training, Trainee Research Networks (TRNs) appear to be one of the most important emerging initiatives over the last half-decade. In this article, we reflect on the experience of REACH (Research, Evaluation & Audit for Child Health), the London TRN, exploring its inception, aims, process and projects, as well as the learning gained from those involved in running the organisation over the last four years.

**Setting up a regional TRN**

Collaborative, network-based research leads to larger and accelerated research outputs[13–15]. TRNs have long histories of success in other specialties and emerged in paediatrics from 2014 onwards[16–20]. Recognising the value of these trainee led initiatives, a central RCPCH TRN group launched in 2021 to help development of new regional networks and support existing ones, with 12 regional TRNs now in existence[21].

In 2020, London had an active academic subgroup within its London School of Paediatrics (LSP) Trainees Committee, providing educational sessions and networking opportunities. The REACH network was created due to anecdotal experience, subsequently supported by data from our PEAR study, of a lack of equitable research opportunities[11]. During inception, founding trainees sought the experience of existing TRNs, absorbing lessons learnt, challenges to anticipate and tips for success. From an initial larger working group, a central committee was formed at the end of 2021, launching the network’s first project in 2022 (figure 1). Early work prioritised development of network infrastructure, brand identity, communication channels and formulation of guidance documents such as a constitution, standardised project proposal forms and a project standard operating procedure. Transparency has been important in all operating and decision-making processes, especially relating to aims, recruitment, project selection, monitoring and accessibility. REACH guidance documents are publicly available via the network website[22].

**Network structure, maintenance and growth**

The REACH network is built on collaborative working between a central committee, project teams and local teams (figure 2). The central committee coordinates and supports all REACH activities, holding responsibility for strategic direction-setting, network growth and maintenance, project selection, member recruitment, monitoring and accessibility. Central committee members are selected by the network chairs and other central committee members via a competitive process, comprising an application form, task scenario, and interview focusing on their team working skills, problem solving ability, and enthusiasm. Whilst prior research experience is of course valuable, REACH aims firstly to provide experience and learning. Within the central committee, regional coordinators recruit local teams, disseminate study information and provide operational support to each site. Project leads take responsibility for individual projects, acting as the driving force from conception to completion. Local leads at individual hospitals are the cornerstones of the network. They facilitate project delivery at local level, often coordinating multiple studies, recruiting a local team to assist with data collection, and liaising with Clinical Governance and Research & Development departments.

Rotational training is a significant barrier to research engagement and attainment[11]. As projects are coordinated centrally, local leads can hand over projects to one another when they rotate, enabling continuity in large research projects with benefits to both the network and doctors. If a site is left without a local lead, a new lead is recruited. The regulatory and data collection architecture remains at each site, ready to be taken up by the next local lead. At least 71% of local leads have held REACH roles for over six months (22% for over one year) highlighting the opportunity for longitudinal involvement in longer research processes. Central committee members retain REACH roles for even longer at a median duration of 19 months.

Since launching in 2021, REACH has involved a total of 190 doctors and is currently represented at 28 London hospitals. Twenty-two doctors have been part of the central committee, seventeen held project lead roles and four consultants were involved as senior team members. Seventeen doctors have held project lead roles. Locally, 109 doctors have been local leads or data collectors, and 35 consultants have supported REACH within their departments (figure 3 A).

The network’s reach is expanding, as its mailing-list subscribers increase and social media presence grows (figure 3 A). Importantly, REACH is achieving an increasing output in the form of oral and poster presentations and peer-reviewed publications year on year (figure 3 B).

**Equitable access and opportunities**

The London paediatric workforce is diverse, with an increasing proportion of female, less-than-full-time (LTFT) and international medical graduate (IMG) doctors[23–25]. The PEAR study highlighted that certain cohorts, namely women, IMGs, and those working LTFT are disproportionately affected by barriers to research opportunities within the run-through paediatric training programme[11]. Research skills are not only essential for better care of our patients but are also key curriculum competencies assessed at various stages of career progression[10]. As failure to address differential access to research opportunities will widen attainment gaps, we have a responsibility to tackle inequalities by making REACH accessible to all. Table 1 summarises data collected through members surveys on demographics, protected characteristics, and training status.

**Table 1. Demographics and protected characteristics of REACH members**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|   | **Wider Network** | **Central Committee** | **All REACH** | ***Available comparator*** |
| **(A) Demographics and protected characteristics** |
|  | n=117 |  | n=19 |  | n=136 |  |  |
| **Age (years)** |  |  |  |  |  |  |  |
| 25-34 | 87 | 74.4% | 13 | 68.4% | 100 | 73.5% | *74.6% a; 55.1% b* |
| 35-44 | 28 | 23.9% | 6 | 31.6% | 34 | 25.0% | *23.9% a; 43.0% b* |
| PNTS | 1 | 0.9% | 0 | 0.0% | 1 | 0.7% | *n/a* |
| Missing data | 1 | 0.9% | 0 | 0.0% | 1 | 0.7% | *n/a* |
| **Gender** |  |  |  |  |  |  |  |
| Female | 94 | 80.3% | 11 | 57.9% | 105 | 77.2% | *71.8% a; 77.4% b* |
| Male | 21 | 17.9% | 8 | 42.1% | 29 | 21.3% | *27.5% a; 22.6% b* |
| PNTS | 2 | 1.7% | 0 | 0.0% | 2 | 1.5% | *n/a* |
| Missing data | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | *n/a* |
|   |  |  |  |  |  |  |  |
| **Ethnicity**  |  |  |  |  |  |  |  |
| White | 57 | 48.7% | 13 | 68.4% | 70 | 51.5% | 61.3% *a* |
| Asian | 33 | 28.2% | 4 | 21.1% | 37 | 27.2% | 20.4% *a* |
| Black | 8 | 6.8% | 0 | 0.0% | 8 | 5.9% | 3.5% *a* |
| Mixed | 4 | 3.4% | 2 | 10.5% | 6 | 4.4% | 9.2% *a* |
| Other | 11 | 9.4% | 0 | 0.0% | 11 | 8.1% | 3.5% *a* |
| PNTS | 2 | 1.7% | 0 | 0.0% | 2 | 1.5% | *n/a* |
| Missing data | 2 | 1.7% | 0 | 0.0% | 2 | 1.5% | *n/a* |
| **Religion** |  |  |  |  |  |  |  |
| No religion/strongly held belief | 48 | 41.0% | 14 | 73.7% | 62 | 45.6% | *-* |
| Christian | 25 | 21.4% | 1 | 5.3% | 26 | 19.1% | *-* |
| Muslim | 22 | 18.8% | 0 | 0.0% | 22 | 16.2% | *-* |
| Hindu | 4 | 3.4% | 2 | 10.5% | 6 | 4.4% | *-* |
| Jewish | 2 | 1.7% | 1 | 5.3% | 3 | 2.2% | *-* |
| Buddhist | 3 | 2.6% | 1 | 5.3% | 4 | 2.9% | *-* |
| PNTS | 10 | 8.5% | 0 | 0.0% | 10 | 7.4% | *n/a* |
| Missing data | 2 | 1.7% | 0 | 0.0% | 2 | 1.5% | *n/a* |
| **Disability** |  |  |  |  |  |  |  |
| Yes | 1 | 0.9% | 1 | 5.3% | 2 | 1.5% | *-* |
| No | 109 | 93.2% | 18 | 94.7% | 127 | 93.4% | *-* |
| PNTS | 5 | 4.3% | 0 | 0.0% | 5 | 3.7% | *n/a* |
| Missing data | 2 | 1.7% | 0 | 0.0% | 2 | 1.5% | *n/a* |
| **Caring responsibilities** |  |  |  |  |  |  |  |
| Yes | 36 | 30.8% | 5 | 26.3% | 41 | 30.1% | *-* |
| No | 78 | 66.7% | 14 | 73.7% | 92 | 67.6% | *-* |
| PNTS | 2 | 1.7% | 0 | 0.0% | 2 | 1.5% | *n/a* |
| Missing data | 1 | 0.9% | 0 | 0.0% | 1 | 0.7% | *n/a* |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|   | **Wider Network** | **Central Committee** | **All REACH** | ***Available comparator*** |
| **(B) Training status** |
|   | n=117 |  | n=19 |  | n=136 |  |  |
| **Flexible working** |  |  |  |  |  |  |  |
| Full-time | 67 | 57.3% | 12 | 63.2% | 79 | 58.1% | *52% c* |
| Less-than-full-time | 49 | 41.9% | 7 | 36.8% | 56 | 41.2% | *48% c* |
| PNTS | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | *n/a* |
| Missing data | 1 | 0.9% | 0 | 0.0% | 1 | 0.7% | *n/a* |
| **Academic training post (previous or current)** |  |  |  |  |  |  |  |
| Yes | 7 | 6.0% | 10 | 52.6% | 17 | 12.5% | *14.1% a* |
| No | 110 | 94.0% | 9 | 47.4% | 119 | 87.5% | *85.9% a* |
|   |  |  |  |  |  |  |  |
|   | n=79 |  | n=8 |  | n=87 |  |  |
| **OOP time for research (previous or current)** |  |  |  |  |  |  |  |
| Yes | 14 | 17.7% | 4 | 50.0% | 18 | 20.7% | *12.4% d* |
| No | 65 | 82.3% | 4 | 50.0% | 69 | 79.3% | *87.6% d* |
| **Level of training**  |  |  |  |  |  |  |  |
| Foundation | 2 | 2.5% | 0 | 0.0% | 3 | 3.4% | *-* |
| SHO (ST1-3) | 26 | 32.9% | 1 | 12.5% | 31 | 35.6% | *41.5% a* |
| Registrar (ST4-5) | 29 | 36.7% | 5 | 62.5% | 31 | 35.6% | *32.4% a* |
| Registrar (ST6-8) | 12 | 15.2% | 2 | 25.0% | 12 | 13.8% | *26.1% a* |
| Locally Employed Doctor | 8 | 10.1% | 0 | 0.0% | 8 | 9.2% | *-* |
| Consultant  | 3 | 3.8% | 0 | 0.0% | 3 | 3.4% | *-* |
| **Subspecialty training (SPIN/GRID)** |  |  |  |  |  |  |  |
| Yes | 12 | 15.2% | 2 | 25.0% | 2 | 2.3% | *-* |
| No | 33 | 41.8% | 2 | 25.0% | 14 | 16.1% | *-* |
| No but planning to apply | 34 | 43.0% | 4 | 50.0% | 37 | 42.5% | *-* |
|   |  |  |  |  |  |  |  |
|   | n=84 |  | n=19 |  | n=103 |  |  |
| **Primary Medical Qualification** |  |  |  |  |  |  |  |
| UK | 59 | 70.2% | 16 | 84.2% | 75 | 72.8% | *88% a; 84.9% b* |
| IMG (including EU/EEA) | 25 | 29.8% | 3 | 15.8% | 28 | 27.2% | *12% a; 15.1% b* |

**Table 1. (A) Demographics and protected characteristics and (B) training status of REACH members**

Data collected from memberships surveys conducted in March 2023, September 2023 and March 2024.

PNTS – prefer not to say; OOP – out of programme; Locally Employed Doctor: doctors employed by a trust and not in an Health Education England-approved training programme, includes clinical fellows and trust grade doctors; SPIN – special interest; GRID – subspeciality training; IMG – international medical graduate

Comparator data specific to London non-consultants paediatricians: a 2022 REACH PEAR study (n=142)9; b 2023 GMC data explorer specified for London region paediatric trainees (n=981)25; c 2023 London School of Paediatrics Trainee Survey (n=705)27; d personal communication NHS England (Health Education England at the time) in 2022

These data pool responses from consecutive surveys, thus are indicative estimates only. Compared to GMC data on London paediatric trainees, distribution of age, gender and LTFT status align (table 1)[25]. Encouragingly, REACH engages a more ethnically diverse group of doctors, with fewer members identifying as white and an estimated 27% holding a non-UK primary medical qualification, surpassing the London background rate of 12-15% of international medical graduate (IMG) paediatric trainees (table 1)[11,25]. Whilst unable to access contextual data on other protected characteristics such as sexuality, ethnicity, and caring responsibility, we will continue to examine these amongst REACH members. Following the publication of our first equality, diversity and inclusion (EDI) report, we are committed to promoting equity of access and inclusivity within our network[22].

Research active trainees are commonly in the privileged position to hold an NIHR-funded Integrated Academic Training (IAT) post or take time out from the training programme (OOP)[11]. Furthermore, they are often more senior and have subspecialty interests. This trend is reflected amongst REACH central committee members, about half of whom have taken OOP time for research and/or held IAT positions (table 1). The wider network appears particularly inclusive, with a higher proportion of non-IAT trainees compared to London background rates. REACH members come from a wide range of training levels with more than 70% working at SHO or ST4-5 registrar level, indicating appetite and capacity for research amongst more junior doctors and trainees seeking research exposure prior to sub-specialty applications. Aligned with our ethos of opening up research opportunities to all pre-consultant paediatricians we estimate that more than 10% of our members are non-trainee doctors working in paediatrics, such as locally employed or foundation doctors (table 1).

**Multi-site project delivery**

REACH conducts a range of trainee-led multi-site projects, including prospective and retrospective observational studies, cross sectional surveys, Quality Improvement (QI) projects and systematic reviews. Project ideas can come from any doctor working in a pre-consultant role, with the central committee using a transparent selection process to determine which are taken forward. The project leads take responsibility for planning, development, set-up, data collection, analysis and dissemination, closely supported by the central committee.

***Core Research Projects***

REACH has supported two large, multi-site projects; Febrile Infants Regional Evaluation (FIRE) and Bilirubin Assessment in Neonates of Every Skin Tone (BiliNEST). Each is a significant undertaking, with FIRE data currently being analysed three years since conception and BiliNEST ten months into planning and protocol writing. Early stages involve a period of ‘scoping’, collecting local guidelines and reviewing local infrastructure (e.g electronic patient record systems) to identify potential project barriers. In parallel, work starts on protocol and case report form (CRF) writing, then Integrated Research Application System (IRAS) applications, ethical review (REC) submission and registration at individual sites using organisational information documents (OID). Data entry requires recruitment of local data collectors and creation of a user-friendly data collection tool such as REDCap (Research Electronic Data Capture) through which only non-identifiable data is shared and stored, hosted by the sponsor on a secure server. Data ownership and oversight lies with the study leadership team accountable to the sponsor’s data governance processes. Data analysis is carried out by interested and/or qualified network members (often the project leads), with support and oversight from seniors and PIs. Finally, dissemination of results allows opportunities for statistical analysis, manuscript writing and presentations. REACH research projects are approved by local Research & Development teams at each site when enlisted, and their governance processes are followed, with one site acting as Sponsor for the overall study. Although this has not yet been required, the Sponsor’s procedures would be followed for any significant incident reporting.

These already challenging processes can be exacerbated by member’s limited research experience. While delays can be disheartening, these projects are not purely for scientific endeavour, and provide invaluable opportunities for learning and developing skills[26]. Lessons learnt from FIRE have refined processes, already conferring benefits for BiliNEST including a realistic timeline, understanding of required documentation, the importance of thorough scoping and the need for a clearly defined protocol and CRF from the offset.

***Ancillary Projects***

Alongside core projects, REACH undertakes a variety of other work. To effectively support doctors, it is important to understand the current landscape of research and multi-centre QI experiences amongst London paediatric trainees. The Paediatric trainee Experience in multi-site Audit and Research (PEAR) study gathered data on this and evaluated trainee access to the REACH network, identifying gaps in both demographics and opportunities. Highlighting lack of protected time for research as a significant barrier, a follow-on study, Direct Rostered Opportunities for Protected Supporting Professional Activity (SPA) (PEAR DROPS) is being conducted to quantify this for London paediatric trainees.

To identify research themes important to paediatric trainees, we developed a regional priority setting project. Unfortunately, following difficulties in planning, motivation and project leadership, the project did not progress. Although disappointing, this has enabled reflection on the challenges faced by TRNs such as balancing autonomy and accountability .

To create leadership opportunities for as many doctors as possible, the Quarterly QI Projects (QQIP) programme was developed to support local leads in completing short-term, small-scale (<5 question survey, or guideline share) projects utilising the network. As the REACH multi-site QI arm grows, projects leads are encouraged to register QQIPs with local clinical governance departments as appropriate. A recent QQIP on oral fluid challenges is being supplemented by a REACH-coordinated systematic review. This has catalysed the development of a new REACH initiative, a novel Systematic Review Hub, providing guides, proformas and a space to match those seeking research experience with doctors leading their own reviews.

**Education**

An Academic Subgroup exists within the LSP which provides educational opportunities related to research and critical appraisal[27].Therefore, unlike other TRNs, education was not an initial key aim for REACH. However, the PEAR study highlighted that many trainees desire more formal training, thus we have embedded accessible learning opportunities wherever possible[11]. As part of REACH quarterly update webinars for local leads, we invite speakers on a wide variety of topics broadly mapped to curriculum capabilities, with content subsequently shared via social media. Local leads are expected to complete Good Clinical Practice training and crucial learning takes place through participating in our multi-site QI and research projects[26]. To widen access and share knowledge, we continue to collaborate with other organisations, namely LSP, Soft Landing and other TRNs[28]. The network’s educational value was recently recognised in a PEdSIG (Paediatric Educators' Special Interest Group) awarded grant[29].

**Network communication strategies**

Collaborative success depends on effective communication. Being trainee-led, REACH is well placed to tailor and innovate its communication strategies to engage a trainee audience. Online drives are utilised for shared storage and collaborative working, with email and WhatsApp used for operational team communication. Many trainees within the broader network report email fatigue and REACH thus predominantly utilises WhatsApp communities with cascading groups to disseminate information. To ensure we engage with as diverse an audience as possible, multiple channels of outgoing communication are utilised to recruit, disseminate information and educate. These include the REACH website, regular newsletters, collaborative organisations (e.g. LSP, Soft Landing) and social media channels such as YouTube, Instagram, X; the latter in particular, engages other professionals in conversations about project results, raising REACH's profile among academics and healthcare professionals. We are developing an online noticeboard to showcase external academic opportunities.

**Benefits of REACH involvement**

Doctors report clear career benefits from REACH participation, with 87% of the central committee and 39% of wider network members using it to evidence competencies in job or training programme applications (figure 4 A). Furthermore, over 75% of all REACH members use their involvement to evidence curriculum competencies; especially those relating to research and quality improvement, but also leadership, team working and education (figure 4 B). Members, particularly those in the central committee, also report perceived improvements in access to research training and activities, their evidence-based medicine knowledge base, and leadership and project management skills (figure 4 C). To date, 100% of central committee members rate their REACH experience as excellent and 90% of wider network members report it as good or excellent.

**Challenges**

REACH represents many committee member’s first experience of leading an organisation of this size and complexity. While missteps and complications are expected, having a reflective and reactive nature has enabled us to adapt to new challenges and learn as we do so.

***Engagement***

REACH is driven entirely by self-motivation, relying on the creation of intrinsic incentives to create a network beneficial to all participants. While the rewards for central committee members and project leads are evident, ensuring value for local teams may be less apparent. To maintain engagement, the central committee fosters a welcoming community by providing consistent and accessible support alongside regular social events and check-ins. Ownership and autonomy for project teams and local leads is encouraged, whilst appreciating individual capacity limitations. REACH strives to make all activities educationally and professionally valuable, regularly seeks member’s feedback, and places emphasis on acknowledging everyone’s contributions through personalised certificates and an inclusive collaborative authorship policy.

***Autonomy vs experience***

The enormous benefits of valuing autonomy and experiential learning come with significant trade-offs. Purposefully involving doctors with limited academic experience and training creates several obstacles to navigate. These relate to minimal research exposure, lack of specific skills such as data analysis and scientific writing, and inexperience in navigating research pathways. While the advantages to this approach are clear, a substantial amount of time is spent supporting and developing skills de-novo which can distract from direct project progression.

***PPI***

REACH has always emphasised the value of patient and public involvement (PPI) in projects and ultimately aims to establish its own young people and parents advisory group. However, administrative and financial barriers as well as lack of formal PPI training are hurdles to overcome. Nevertheless, BiliNEST has made headway by using a PPI survey and parent representative to guide its study protocol.

***Funding***

REACH receives no regular funding. Operational costs include website domain, host server and video conferencing, alongside ad-hoc project-related costs such as software licences, PPI engagement and dissemination expenditures (conferences, printing and journal fees). To date, committee members have self-funded the majority of this; a necessary but unsustainable solution. Various funding methods are being considered going forward, including more formalised self-funding, fundraising campaigns and applications for grants for research and education, building on our one-off PEdSIG award[29].

***Sustainability and longevity***

Planning for network sustainability is key to building a successful organisation. Until an intrinsic momentum is achieved, longevity relies on the internal drive and substantial organisational memory held by long-standing committee members. Maintaining a consistent team of motivated individuals and anticipatory succession planning are key considerations for a fledgling TRN. REACH aims for in-built continuity by sharing roles, knowledge and skills, and formalising processes through SOPs and guidance documents*.*Further challenges arise with multi-site, multi-project work. Considerable team-building, leadership, communication and organisational skills, alongside exploitation of remote-working and task-sharing technologies, are required to maintain local drive and overall project coherence[26]. However, we find that simultaneously supporting a variety of projects, each in different stages, maintains momentum and produces a variable workload with continuous opportunities for involvement.

**Future directions**

It is encouraging that the RCPCH recognises the value of TRNs, with a promising future ambition to coordinate national projects delivered through the regional networks. Enhanced inter-regional and even cross-specialty collaboration has extraordinary potential for shared learning and impactful project delivery. Hopefully, as regional networks build momentum with increasing membership and outputs, support from the college as well as local schools of paediatrics might grow further. Ultimately, akin to quality improvement work, TRN involvement could become standard practice for all paediatric trainees, enabling true integration of research activities in training by protecting and respecting time allocated for this work. On a national level, there might be future scope for support by, and collaboration with, NIHR Research Delivery Networks. Aligned with the aim to embed academic literacy and offer research opportunities to the wider workforce, TRNs might consider broadening their scope to involve not only medical students, but also nurses and allied health professionals.

**Conclusion**

REACH is a work in progress. Established three years ago, our goals have grown with us, from our initial aims of facilitating research opportunities, providing educational experiences and performing high quality projects to becoming advocates for accessibility, equity of opportunities and research integration in training. We have gained significant experience not only in research related activities, but in leadership, management, EDI, and the power of large scale, collaborative working. There is a long way to go to fully bridge the gaps in research exposure, but we believe TRNs are a powerful and valuable tool in improving the experience of trainees and fostering a culture of regular academic pursuit as a core part of clinical training.

**Acknowledgments**

We are grateful to all past and current members of the REACH network including members of the initial working group without whom this network would not be in existence, as well as the leads of other regional paediatric TRNs who continue to share valuable knowledge and advice.

**Competing Interests**

None to declare

**Funding Statement**

REACH received a grant from the Paediatric Educators' Special Interest Group (PEdSIG) in 2023 (no award/grant number)

**Data availability statement**

PEAR study data is available upon request.

**Ethics statements**

Patient consent for publication - Not applicable.

Ethics approval - Not applicable.

**Figure legends**

**Figure 1** REACH network timeline

SOP - Standard Operating Procedure; EDI - Equality, Diversity and Inclusivity

**Figure 2** REACH network organisation

1. Network structure, roles and responsibilities (B) Project processes

PPI - Patient and Public Involvement; EDI - Equality, Diversity and Inclusivity; R&D - Research & Development; REC - Research Ethics Committee; IMG – international medical graduate

**Figure 3** REACH network growth and outputs

(A) Cumulative total of unique individuals ever involved in REACH and subscribers to mailing list (B) Network outputs in the form of oral and poster presentation and peer-reviewed publications per year (up to July 2024)

**Figure 4** Career progression and skills

Member-reported use of REACH experience in (A) job/training scheme applications, (B) training portfolio evidence and (C) perceived improvement in research access and skills.

Data collected from members surveys in September 2023 and March 2024.

Wider network (local teams and project teams) n=79; Central committee n=9

IAT - Integrated Academic Training (NIHR funded Academic Clinical Fellow, Academic Clinical Lecturer); OOP - out of programme.

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