

Overview of the Research & Development Directorate

Quarter 1 2023-24

Dr Paddy Calvert & Vikki Hughes



Executive summary



Royal Papworth Hospital
NHS Foundation Trust

Purpose

The purpose of this paper is to provide an update of the current status of the Research & Development Department.

Headlines

Research is one of the cornerstones of Royal Papworth Hospital and everyone is rightly proud of the wide variety of research conducted at the Trust covering all clinical specialities. The types of research range from first in patient medicinal and device studies through to studies evaluating quality of life after cardiac surgery. The department also houses a UKCRC accredited Clinical Trials Unit which manages multicentre grant funded and more recently industry funded studies.

Research and Innovate is one of the 6 key strands of the Trusts strategy and the department is actively working towards developing the Trust as a centre for research and development. The publication of the new Trust Research Strategy in December 2022 and the subsequent significant investment from the Trust to support Research Leader posts as well as core R&D infrastructure will enable a step change in research activity.

The opening of the HLRI in April 2022 offers an opportunity for a step change in research activity both within the R&D Department and the Clinical Research Facility itself. The access to the additional facilities that will be available for carrying out more complex studies or high throughput studies, it is envisaged that there is a significant potential for growth in the volume of research that is carried out within the Trust.

Research Strategy (2023-28) 5 year Targets - overview

Investment in People and Diversity Five Year Targets

1. Five 'Research Leader' (50/50) posts appointed
2. Reduction in study approval time by 25% by investment in RDD staff and cultural changes
3. Steering group established for Allied Health and Nursing Professionals and Clinical Scientists to promote research
4. A series of institutional cultural changes to promote and facilitate research

Papworth Clinical Trials Unit Five Year Target

To expand by 25% the portfolio of trials with an emphasis on novel trial design in cardiothoracic medicine via closer collaboration with academic and industry partners

Digital Healthcare and Research Five Year Targets

1. Implement research data solutions for Royal Papworth by 2023 including data anonymisation, automated consent checking and natural language processing
2. Develop information technology, ethical consent and information governance systems to permit de-identified data on all patient to be available for clinical research subject to a patient opt-out

Tissue Bank Five Year Target

1. Tissue Bank to be housed on a single site on Cambridge Biomedical Campus in HLRI or RPH
2. Create a Tissue and Data bank, with all RPH patients being invited to consent, creating an innovative resource for investigators

Innovation Five Year Target

Innovation Committee to engage with innovators, funders and industry to ensure RPH attracts, develops and delivers innovation to the healthcare market

Research Strategy (2023-28) 5 year Targets - detail



Royal Papworth Hospital
NHS Foundation Trust

Investment in People and Diversity Five Year Targets

1. Appointment of 5 'research leaders' as departmental champions of research to drive forward both personal and departmental research outputs. Support of non-medical research with at least 1 research leader appointed from nonmedical staff.
 - a. Key targets for appointees will be to fund the investment in salary with research grants, hence bringing income to the Trust.
 - b. Increase in research activity will support the fledgling HLRI by providing trials to support the CRF.
 - c. Increased 'research delivery' capacity will improve the approval and delivery of clinical research, providing more money via grant application for staff.

2. The R&D Department requires additional infrastructure to support the Research Leader posts and research as a whole across the organisation. In particular:
 - a. A Research Governance post to allow faster approval of research studies being set-up at the Trust
 - b. A Clinical Project Manager to support with the identification of grant opportunities, running grant development workshops and support the writing of applications
 - c. A Quality Assurance Manager to support the delivery of the new quality management system (Q-Pulse) and supporting the delivery of quality management systems for new medical devices being developed at the Trust. This post will work in conjunction with the MedTech application we are collaborating with alongside CUH.
 - d. Appointment of 3 Research Nurses / Clinical Trial co-ordinators to increase capacity across the organisation to set-up and run studies.

Research Strategy (2023-28) 5 year Targets - detail

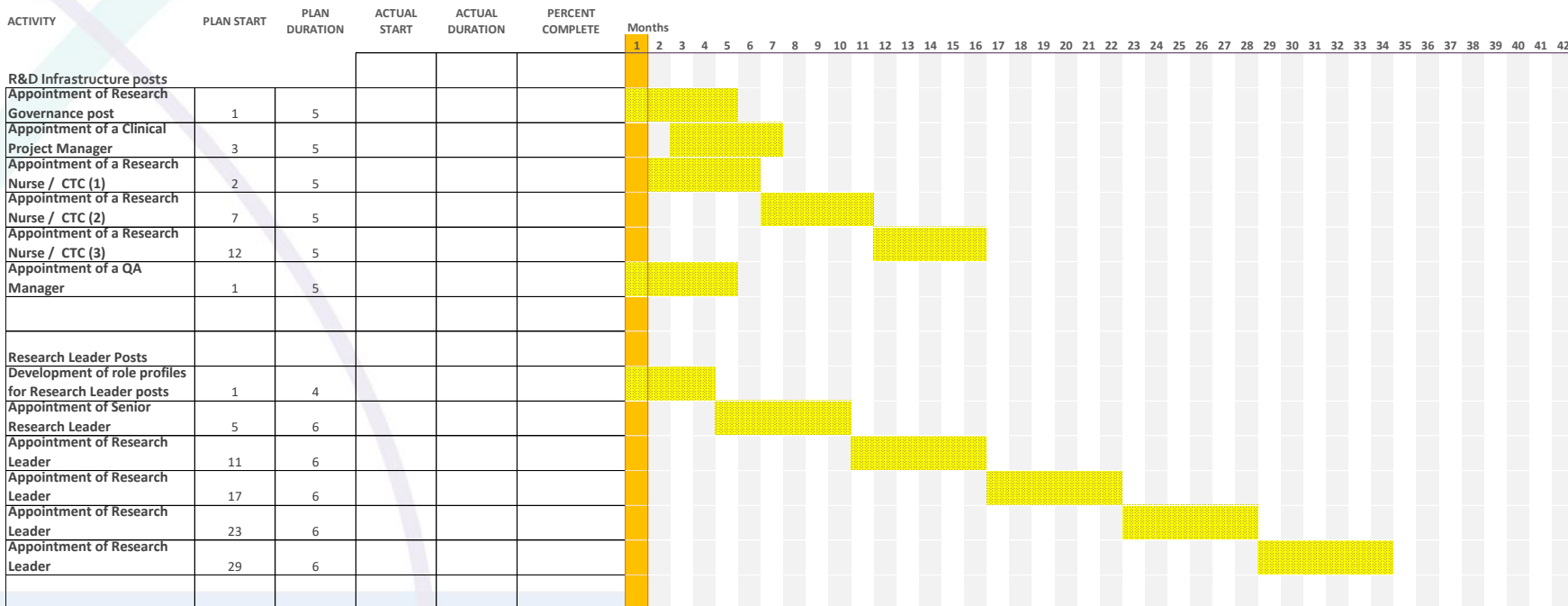


Royal Papworth Hospital
NHS Foundation Trust

Research Strategy Implementation Plan

Select a period to highlight at right. A legend describing the charting follows.

Period Highlight: 1 Plan Duration Actual Start % Complete Actual (beyond plan) % Complete (beyond plan)



Research Strategy (2023-28) 5 year Targets - detail



Royal Papworth Hospital
NHS Foundation Trust

Investment in People and Diversity Five Year Targets – Metrics and timelines

1. Reduction in the time taken for studies to be set-up and start recruiting patients. At RPOH our current set-up time is 120 days compared with a national median time of 90 days. **The target is a 25% reduction in set-up time within the first 2 years, with a further 25% reduction over the following 3 years.**
2. Increase in the number of grants submitted to external funding bodies. **The target is a doubling of an average of 6 grant applications over the preceding 12 months to 12.**
3. Increase in the number of Royal Papworth Hospital sponsored studies on the NIHR portfolio (funded from open national competition). **The target is a 50% increase from an average of 16 studies active over the preceding 12 months to 24.**
4. Increase in the number of studies run through Papworth Trials Unit. **The target is a 50% increase from an average of 16 studies active over the preceding 12 months to 24.**

Research Strategy (2023-28) 5 year Targets - detail



Royal Papworth Hospital
NHS Foundation Trust

Metric name	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
Appointment of R&D Infrastructure posts - plan	0	3	4	5	5	6														
Appointment of R&D Infrastructure posts - actual	0	0	0	0	0	0														
Appointment of Research Leader posts - plan	0	0	0	1	1	2	2	3	3	4	4	5	5							
Appointment of Research Leader posts - actual	0	0	0	0	0	0	0	0	0	0	0	0	0							
Governance Approval time (days) - planned	120	115	110	105	100	95	90	88	86	84	82	80	78	76	74	72	70	70	70	70
Governance Approval Time (days) - actual	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120
Grant Applications - planned	6	6	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	12	12
Grant Applications - actual	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
RPH sponsored portfolio studies - planned	16	16	16	16	17	17	17	18	18	19	19	19	20	20	21	21	22	22	24	24
RPH sponsored portfolio studies - actual	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
Number of studies run through the Trials Unit - planned	16	16	16	16	17	17	17	18	18	19	19	19	20	20	21	21	22	22	24	24
Number of studies run through the Trials Unit - actual	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16

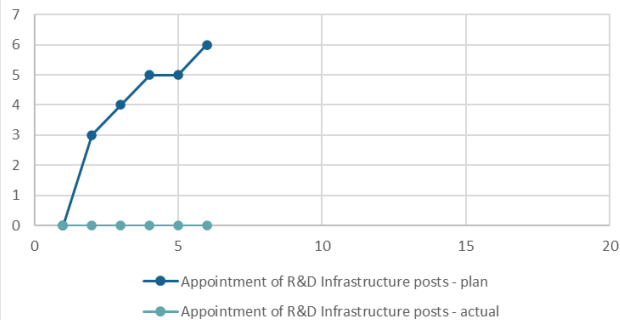
The table will be colour coded (RAG rated) as we go through to show if we are in line with planned KPIs (see previous slide for narrative to explain the KPIs chosen)

Research Strategy (2023-28) 5 year Metrics – monitoring delivery

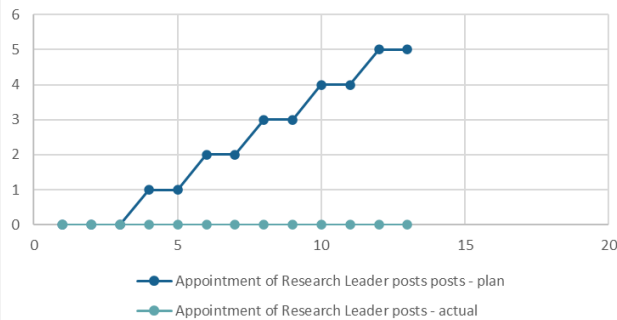


Royal Papworth Hospital
NHS Foundation Trust

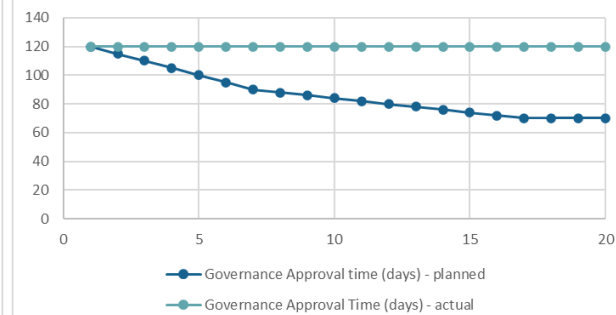
R&D Infrastructure posts



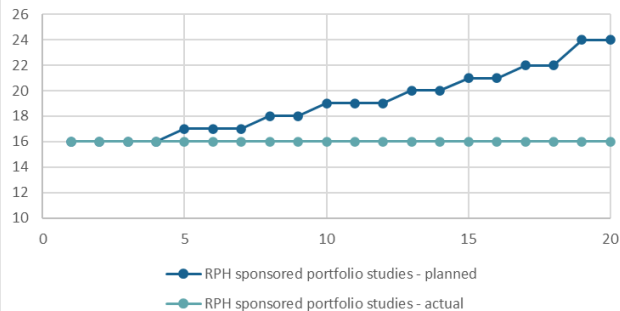
Research Leader posts



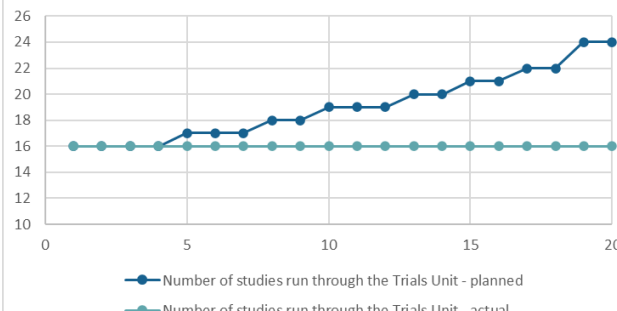
Governance Approval times



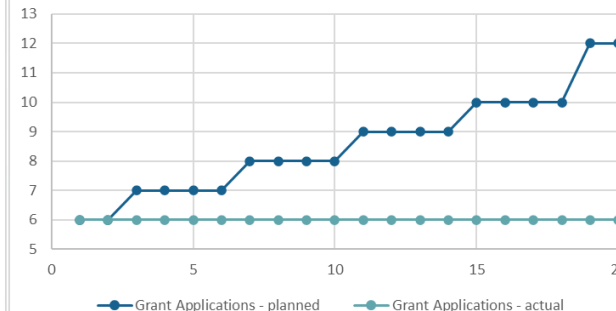
RPH portfolio Studies



CTU Studies



Grant applications over the last 12 months



The horizontal axis for each graph shows quarter 1 – 20 of the 5 year strategy

Reduction in study approval time



Royal Papworth Hospital
NHS Foundation Trust

Performance in initiating studies

Latest figures from nationally published figures are from Q2 2022-23

Quarter 2 2022-23	Number of studies	Mean duration from date site selected to first patient recruited	Median duration from date site selected to first patient recruited
National results	4633	105.2	91
RPH results	22	123.3	120

RPH taking approx. 30 days longer than the national median figure. The delays are due to a variety of capacity issues including:

- a) Research Governance Team
- b) Pharmacy
- c) Echo

Reduction in study approval time



Royal Papworth Hospital
NHS Foundation Trust

Aim: to reduce the median time from site selected to first patient recruited to 90 days (current national median) in the next 18 months with a further 25% reduction by the end of year 5.

Actions:

- 1) Go out to advert and appoint an additional band 6 Research Governance Co-ordinator (pending Investment Committee approval for funding)
- 2) Get additional support for the Governance Team from other local NHS Organisations – underway. 5 days a week support from North West Anglia Foundation Trust for an initial 3 month period
- 3) Get additional support for Pharmacy – funding for an additional part-time Clinical Trials Pharmacist has been identified from R&D funds. Post is out to advert and the vacancy should be filled by August 2023.

Number of active studies

Baseline figures for number of active portfolio studies being run at RPH. Portfolio studies are those which are funded via open national competition and recruitment to these studies is monitored by the NIHR (our recruitment target) and affects our CRN funding.

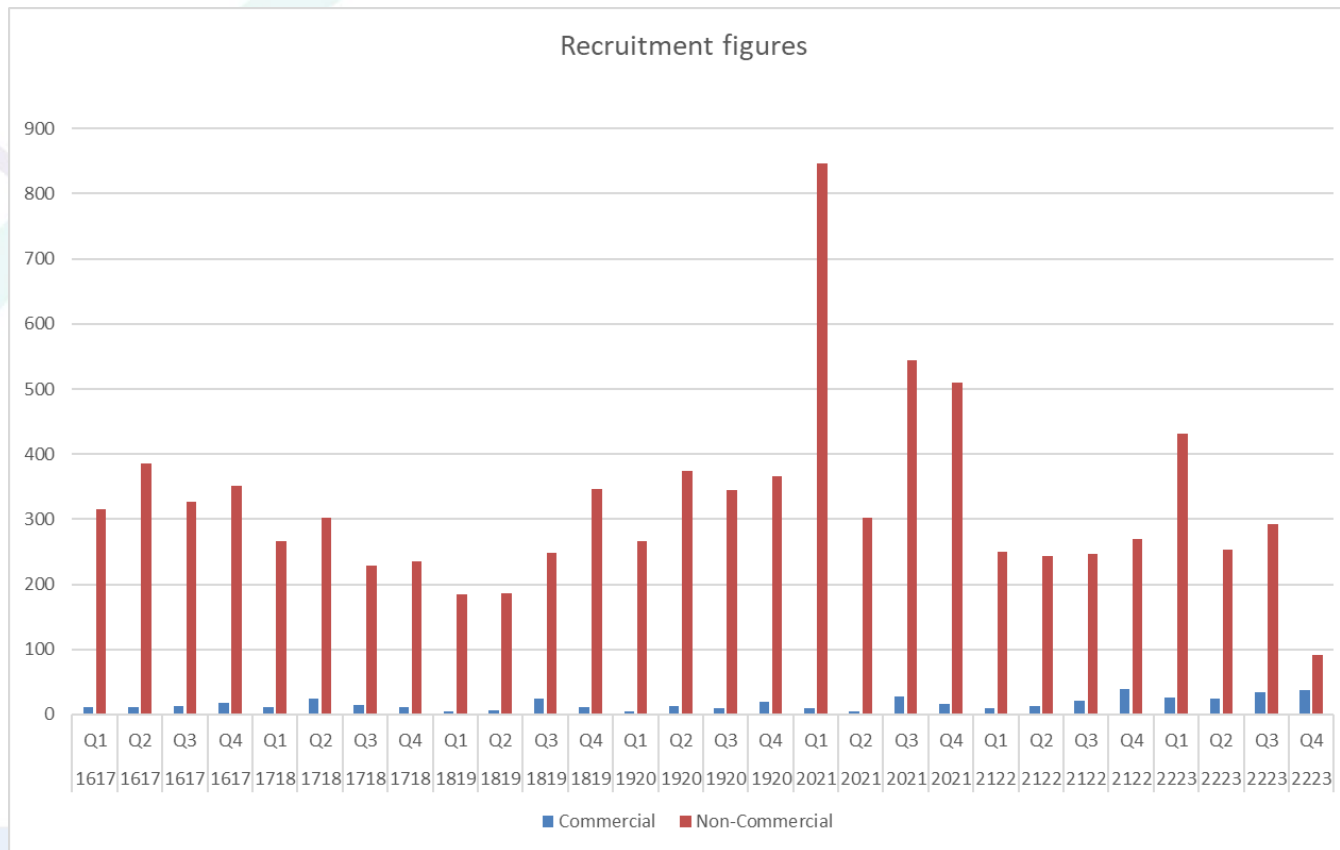
Time frame	Commercial Studies	Non-Commercial	RPH sponsored
Q1 17/18	18	25	15
Q1 23/24	37	45	16

Patient recruitment



Royal Papworth Hospital

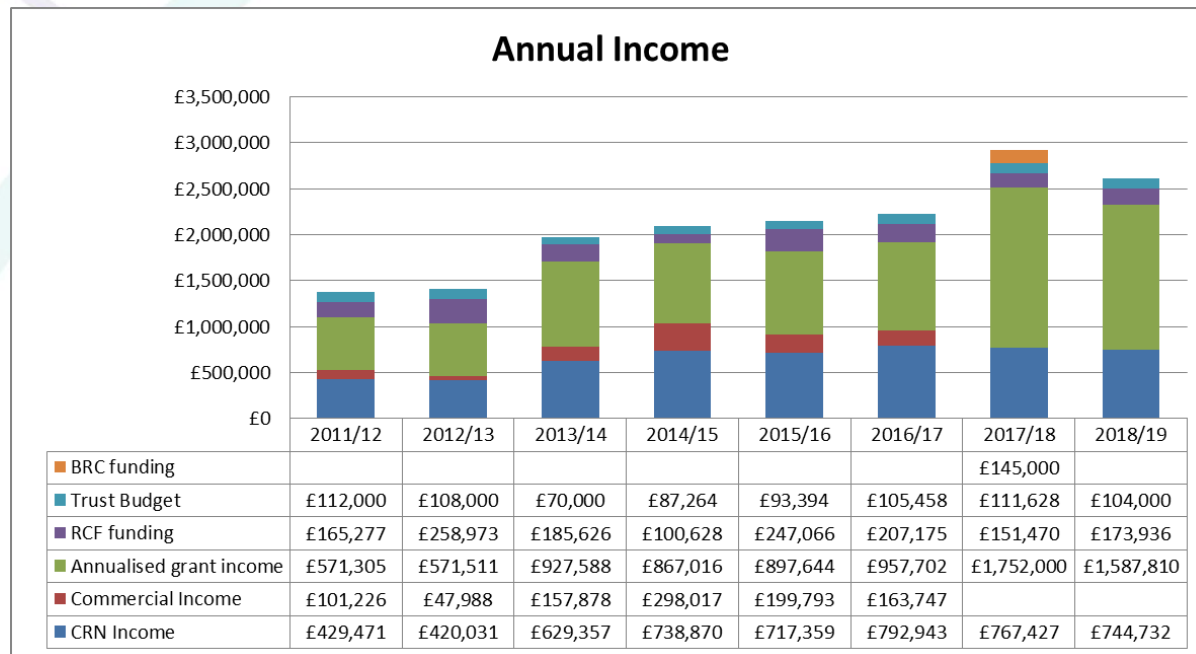
NHS Foundation Trust



Income



Split between CRN / RCF / study invoicable income (commercial / non-commercial)



Investment in People & Diversity – Diversity metrics

For Patients

- 1) Work is underway to increase the diversity of the PRA panel. A leaflet has been produced by the Communications team to be displayed on the screens in patients rooms.
- 2) The BI team have developed a dashboard to enable us to monitor ethnicity of patients participating in clinical trials and compare this to the Trusts patient population. This will enable us to more accurately target under-represented groups.

For Staff

- 1) We are committed to increasing the non-medical PIs and holders of Innovation awards

Currently 7 projects funded through the innovation fund of which 1 is a non-medical (14%)



Royal Papworth Hospital
NHS Foundation Trust



Investment in People & Diversity – Diversity metrics



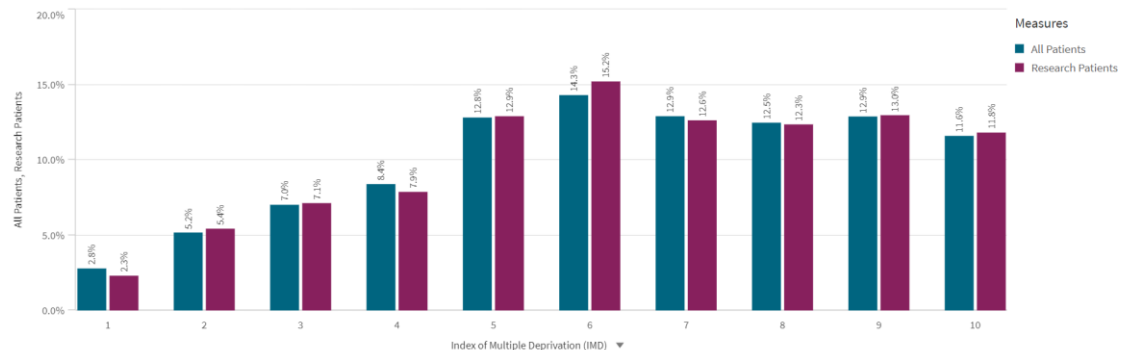
Royal Papworth Hospital
NHS Foundation Trust

2022-23 data

Metric	All patients	Research patients
Male : female ratio	60.8% : 39.2%	50.7% : 49.3%
Age	Median = 63	Median = 66
White British or not known : other ethnicities	88.7% : 11.3%	92.1% : 7.9%

The data shows there is a higher percentage of females and people of white origin as research participants than the Trust patient population.

% of Patients by English Indices of Deprivation Decile



The median age and social deprivation index is similar to the Trust.

Warning – this data has not been fully verified

Papworth Trials Unit Collaboration



Royal Papworth Hospital

NHS Foundation Trust

RPH hosts a UKCRC accredited Clinical Trials Unit. It gained provisional accreditation in 2015, full accreditation in 2018 and in 2022 the accreditation was renewed. The collaboration consists of RPH, MRC Biostatistics Unit and Kings College London (Health Economics).

The unit provides investigators with research support including study design, grant writing, trial set-up, management, and analysis of clinical trials. While our main focus is on cardio-thoracic projects, it can support investigators in other disciplines including supporting SMEs and non-RPH investigators.

The strategy over the next 5 years is:

- a) To identify, implement and support novel trial designs.
- b) Continue to expand our methodological research portfolio
- c) Develop new collaborations with Cambridge Research Institutes and SMEs.

Papworth Trials Unit Collaboration



Royal Papworth Hospital
NHS Foundation Trust

Baseline metrics as reported to the UKCRC:

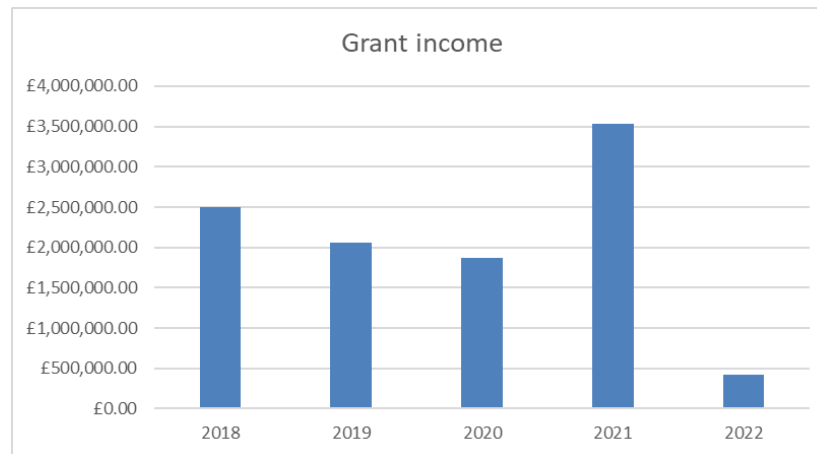
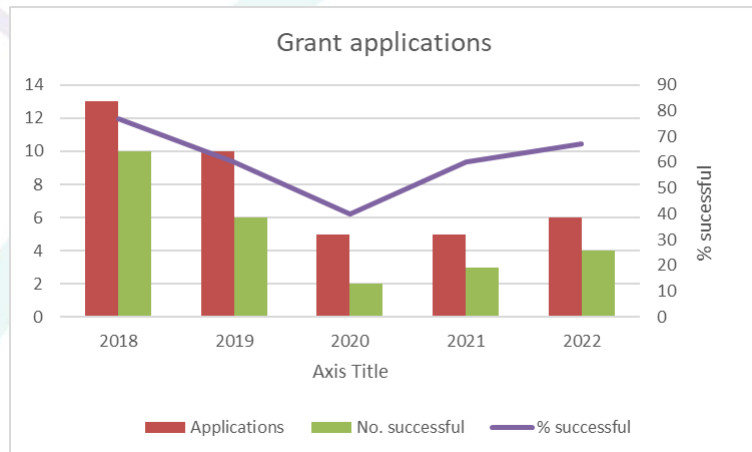
	2018	2022
Number of studies in set up	3	7
Number of studies in recruitment	9	8
Number of studies in follow-up	3	1
Number of studies in analysis	3	4
Total	18	20

Proposed metrics:

- 1) Appointment of the Clinical Project Manager to support grant applications (within the first 12 months)
- 2) Increase in the total number of projects managed through the unit to grow by 25% over the next 5 years (as stated in the Research Strategy)

Grant Applications

Baseline figures



Actions:

- 1) Restart the grant & protocol development workshops (previously called open surgeries) – first workshop held 1st February 2023
- 2) Appoint a Clinical Project Manager to manage the workshops, provide horizon scanning and support investigators with grant development



Royal Papworth Hospital

NHS Foundation Trust

Grant Applications

Quarterly figures split into grants submitted and grants obtained + detail on what we are doing to support eg Grant & protocol development sessions

And co-applicants applications

Publications



Royal Papworth Hospital
NHS Foundation Trust

Number of Publications over the preceding 12 months including the number of original research articles.

Research Publications in the last quarter:

- X
- Y
- Z

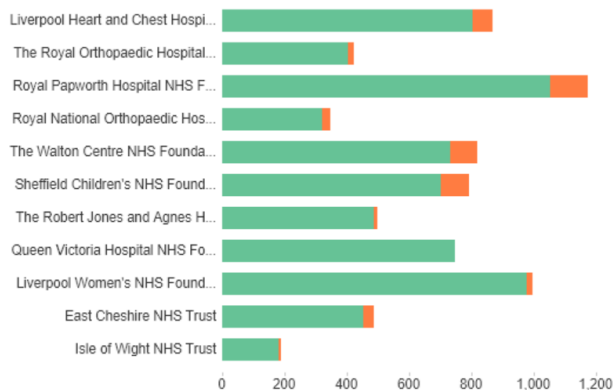
Benchmarking



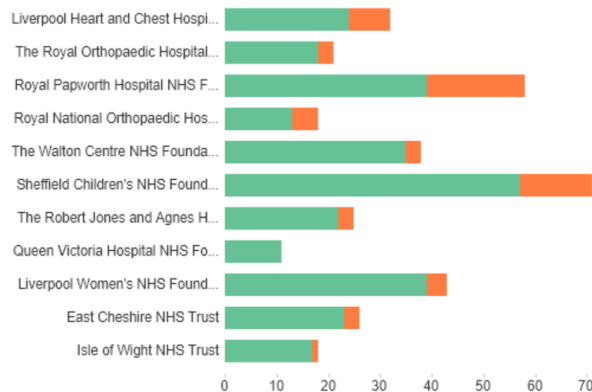
The data below is provided by the NIHR and shows our research activity compares to 10 organisations in the same category (acute, care, CCG etc) for 2022/23.

Attendance (trusts) or population (CCGs) is used as a proxy for measuring similarity. The charts show the most similar organisations at the top, with similarity decreasing down the chart.

Recruitment in 22/23

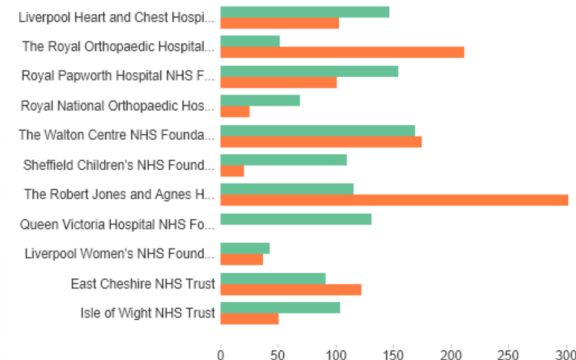


Number of recruiting studies in 22/23



Average set-up time (days) per recruiting site in 22/23

Please note, values have been grouped rather than stacked as this chart shows averages



Green = non-commercial studies, orange = commercial studies.

'In the news'



Royal Papworth Hospital
NHS Foundation Trust

Put one of the Newsbite articles in here