

## Board of Directors (in Public)

### Item 3.3

**Subject:** Research and Innovation Annual Report  
**Date of Meeting:** Tuesday 28<sup>th</sup> July 2020  
**Prepared by:** Vicky Wilkinson, Head of Research & Innovation  
 Dr Margarita Perez-Casal, Director of Research & Innovation  
**Presented by:** Vicky Wilkinson, Head of Research & Innovation  
**Purpose of Report:** To Note

BAF Ref	Impact on BAF
2.2; 2.3; 2.5	This report provides an update of Research & Innovation activity for 2019/20.

#### 1. Executive Summary

This report reflects the overall research and innovation activity at the Trust throughout the 2019/20 financial year.

Liverpool Heart and Chest Hospital has continued to grow in research and innovation; the Trust has led a number of activities locally with our academic partners to further enhance the specialist role of LHCH. The Liverpool Centre for Cardiovascular Science has become established and the links with our academic partners have been strengthened.

The Trust has delivered the targets set up by the NIHR for clinical trials, and continues attract studies from industry partners interested on delivering high quality research trials. Our work with the Innovation Agency has resulted in innovations being brought into the Trust. Our staff have been supported and encouraged to work with industry to create prototypes. We have seen solutions for prevention of pressure ulcers being develop by one of our nurse consultants and as a result a staff member and their team was shortlisted for the Patient Safety Innovation award at the NWC Research and Innovation awards in March 2020.

The year has been challenging due to changes within the R&I department and towards the latter part of the year the onset of Covid-19, which brought its own challenges.

#### 2. Background

Research and Innovation at the Trust is one of LHCH's strategic objectives.

The Trust launched a new R&I strategy in 2018 to span to 2021. The strategy focuses on the areas of expertise of our researchers and aims at growing research participation for our patients. However, given the nature of the work so far, and the changes in the local and regional system, it was appropriate to "refresh" the strategy to be better aligned to the new opportunities so this

report will reflect the progress against those objectives.

### 3. Annual Activity

The 2018-2021 Research & Innovation strategy was approved by the Board of Directors in July 2018. However, given the nature of the work so far, and the changes in the local and regional system, it was appropriate to “refresh” the strategy to be better aligned to the new opportunities. A new strategy will be presented to the Trust board in July 2020, which will run until 2022/23.

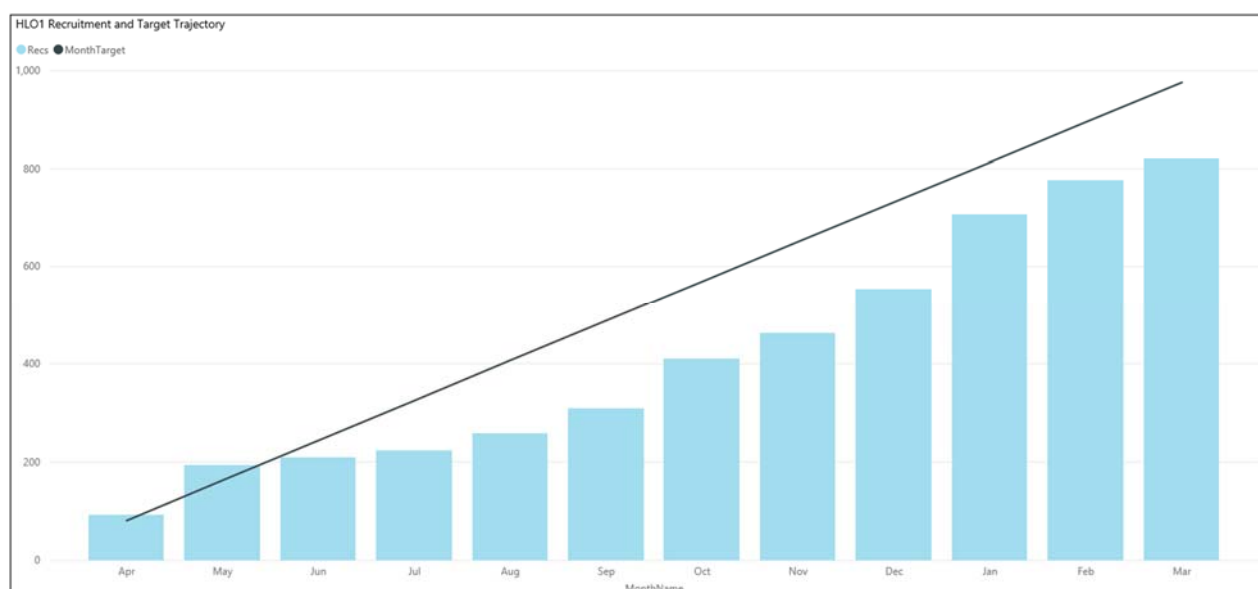
The following were the objectives for the R&I function at the Trust for 2019/20 and the progress against each:

Objective	Progress
Confirm the appointment of Prof Ottensmeier as Professor in Head, Neck and Lung Cancer for the University of Liverpool	Complete. Prof Ottensmeier joining UoL in July 2020.
Develop a Clinical Lecturer in Lung Cancer as part of the support that LHCH will provide to the Liverpool system. The post-holder will be appointed for 5 clinical sessions at LHCH, and 5 research sessions with the University.	Complete. Business case approved by Exec team and approval given to UoL for recruitment to post.
Develop the business case for an Aorto-Vascular Physician (Senior Clinical Lecturer) aligned to LCCS and with 5 clinical sessions at LHCH.	Complete. Business case approved by Exec team. Recruitment process led by UoL.
Application to become a University Hospital based on the criteria published by the Association of University Hospitals in the UK.	Not achieved. Although the Trust submitted an application, we were not successful given the small number of NIHR grants with leadership from LHCH investigators. The plan is to pursue this again in 2020/21 as part of the new strategy.
Promotion of Innovation through collaboration with Innovation Agency Scout model.	Partially achieved. Verity Mather is part of the Innovation Scout group and is leading on this.
Workshop on R&I to be held in December 2019 with the Board of Directors	Complete. The Director of R&I led a workshop on the 17 <sup>th</sup> December 2019 with our BoD. The session had a panel with external speakers who acted as mentors for our own innovators on the day.
Hosting of Liverpool Health Partners and Innovation Agency	Complete. The trust was successful on the bids for hosting each organization. LHP have been hosted since February 2020 and the Innovation Agency since April 2020.

As seen above, progress has been made against the majority of objectives. Those that have not been fully achieved are being incorporated into the new R&I strategy.

Additionally, all NHS institutions receiving NIHR funding for delivery of research are expected to meet a number of performance indicators, the High Level Objectives:

- HLO1- Deliver significant levels of participation in NIHR CRN portfolio studies.
- HLO2 – Deliver NIHR CRN Portfolio studies to recruitment target within the planned recruitment period
- HLO3 – Increase the number of studies delivered for the commercial sector with support from the NIHR CRN
- HLO6 – Widen participation in research by enabling the involvement of a range of health and social care providers
- HLO7- Deliver significant levels of participation in the NIHR CRN Portfolio dementias and neurodegeneration studies – Not relevant to LHCH
- HLO8 - Demonstrate to people taking part in health and social care research studies that their contribution is valued
- HLO9 - Reduce study site set-up times for NIHR CRN Portfolio studies by 5%.



Trust recruitment was 820 against an NIHR target set at 976. Although a decline in recruitment and number of new studies in the first part of the year, an improvement was seen as the year progressed. We believe is sustainable given the number of new studies in the pipeline and the number of studies opened to recruitment. The reduced growth in recruitment in March was the result of the halt to all research activities mandated by NIHR when COVID19 started. Future progress will have to consider the impact of COVID19 related studies on staff workload and the potential impact of redeployment of our research staff.

The proportion of NIHR portfolio commercial studies that achieved or surpassed their recruitment target was 67% against a local NIHR research network ambition of 80%. However the proportion of non-commercial NIHR portfolio studies that achieved or surpassed their recruitment target was 100%. The research nurses that support respiratory research achieved

recruitment of the first global patient into one of the commercial studies, this was a fantastic achievement.

Set up times at the Trust in 2018/19 for commercial and non-commercial NIHR portfolio studies were 123 and 130 days respectively, these figures have reduced in 2019/20 to 94 and 95 days.

Our set up times for studies needs to improve, but the new joint research service (SPARK) through Liverpool Health Partners has started to address this issue as the study set up process is now done centrally. This is in addition to the new team structure in the department and updates planned for R&I processes.

There had been changes within the leadership of the R&I dept. that took place in 2019, with new staff taking up positions. There was also an organisation change process that took place within the department, this resulted in the loss of one role but the creation of a Research and Innovation Operations manager, two Senior Research nurses and two research data managers. The change process was supported by HR and completed by the end of March 2020. The new structure is aimed to support the new R&I strategy that is being established and takes into consideration the wider changes in streamlining of research processes and collaborative working with other trusts through the Liverpool Health Partnership.

The creation of the Liverpool Centre for Cardiovascular Science (LCCS) under the Direction of Prof Greg Lip has been an excellent opportunity for the Trust. Since the official start in February 2019 there has been already a Medical Research Council Fellowship awarded to Dr Tim Fairbairn supported by Prof Lip; another 3 grants have been submitted to NIHR which are particularly important for the Trust reputation as a centre of excellence for research. Furthermore, through LCCS we are now bringing Phase II clinical trials to the Trust, under the leadership of Prof Lip.

With regards to the quality of our research outputs, a search for publications with affiliation to LHCH from 2008 to the end of 2019, has identified a total of 1502 peer-reviewed publications; 20 of them are identified as highly cited publications falling within the 1% of most cited articles.

<b>* Publications 2008-2019</b>	<b>Number of LHCH publications</b>	<b>1502</b>
	<b>Sum of the Times Cited</b>	<b>12829</b>
	<b>Average Citations per Item</b>	<b>8.54</b>
	<b>h-index</b>	<b>51</b>

This demonstrate the quality of the research delivered by our researchers.

#### **Research and Innovation budget for 2019/20.**

Financial performance is important to the success of the Research and Innovation activity at the Trust. R&I is a self-funding department therefore commercial activity and grant income are essential for the delivery of the strategy. 2019/20 has seen a decline in research income and thus a decline in the research reserves.

<b>Income (£000s)</b>	<b>2019/20</b>
<b>Clinical Trials</b>	920
<b>R&amp;D</b>	393
<b>Total</b>	<b>1,313</b>
<b>Reserves (£000s)</b>	<b>1,115</b>
R&D acc	448
Investigators acc	667

It is paramount that the Trust continues to be the site of choice for commercial partners to generate income to become less reliant on NIHR CRN funding, which has declined year on year for the past three years.

#### **4. Conclusion**

The Trust is at an excellent position to lead on Cardiovascular and Lung Cancer research in the system.

Implementation of the Research and Innovation Strategy approved in July 2018 had progressed well but with the changes in the local and regional system, it was appropriate to “refresh” the strategy to be better aligned to the new opportunities, with a new strategy launched in 2020.

#### **5. Recommendations**

The members of the Board of Directors are asked to note the progress made by the Research & Innovation department.