## Key points

1. **Review of progress in delivering the Trust research and innovation strategy**
   - For Information

2. **Plans to expand and publicise the Leeds Clinical Research Facility**
   - For discussion

## Trust Goals

<table>
<thead>
<tr>
<th>Trust Goal</th>
<th>Status</th>
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<tbody>
<tr>
<td>The best for patient safety, quality and experience</td>
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<tr>
<td>The best place to work</td>
<td></td>
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<tr>
<td>A centre for excellence for research, education and innovation</td>
<td>✓</td>
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<tr>
<td>Seamless integrated care across organisational boundaries</td>
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<td>Financial sustainability</td>
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Please copy and paste ✓ against the relevant goal(s)
1. Summary

An ambitious Trust strategy for research and innovation was launched in March 2015, aimed at harnessing the significant advances in clinical science for the benefit of Trust patients by improving access to world-leading research studies. This paper describes successes and challenges in delivering the strategy, including progress made in addressing a key goal of the strategy, the expansion of the Clinical Research Facility. The Board committee for research, education and training receives regular reports on delivery of the strategy at each bi-monthly meeting of the committee.

2. Background

Research underpins excellent clinical services; for example, recent work led by Leeds researchers has confirmed that patients with colorectal cancer have better clinical outcomes in research-intensive hospitals. Therefore a strategic goal is to ensure that all our specialist services are research-intensive. Working in partnership with the University, the Trust has strengthened its research programmes in key areas of strategic strength, including:

Musculoskeletal Disease

The National Institute for Health Research (NIHR) has designated the Trust as a Biomedical Research Centre (BRC) in Musculoskeletal Disease. £6.7m has been awarded for 5 years from April 2017. The Trust is one of only 20 NIHR Biomedical Research Centres and although ranked 18th nationally by funding amount, the quality of the clinical science was noted as “outstanding” by the international review panel.

Cardiovascular Disease

Cardiovascular imaging is a nationally recognised strength in Leeds – for example, a Leeds study has changed clinical practice in the use of scanning techniques to detect heart disease. The 3T Magnetic Resonance Imaging (MRI) system which is part of the Medical Research Council National Centre for Hyperpolarised MRI is now operational in the new Advanced Imaging Centre on the Old Site at the Infirmary. The National Centre is a partnership with the University of York and is developing novel MRI tracers to improve diagnosis and monitoring of a wide range of diseases. Professor Sven Plein was appointed to a prestigious British Heart Foundation Chair in Cardiovascular MRI and Professor Jurgen Schneider, a world-leading pre-clinical MR imaging scientist from Oxford, was appointed to a Chair of Cardiovascular Imaging. The Cardiovascular research group also received a £2.4M Doctoral training award from the British Heart Foundation and a leading group member, Professor Robert Ariens, received a prestigious Wellcome Trust Investigator award for his work on the behaviour of blood clots.
Cancer

The National Cancer Research Institute (a partnership organisation which includes Cancer Research UK) completed a benchmarking exercise for Centres of Excellence in Academic Radiotherapy. The exercise was led by two international reviewers. Leeds has been assessed overall as an “Emerging Centre of Excellence” which compares well with peers.

The Trust was a partner in a successful bid to Cancer Research UK to create a paediatric Experimental Cancer Medicine Centre network. The network comprises eight Children’s Hospitals and will support early phase clinical trials in children.

Significant investment (>£5m) in Leeds by Yorkshire Cancer Research to fund a series of wide-ranging research programmes has been a welcome and prominent feature of 2016.

£750k has been awarded by the NIHR for the Clinical Research Facility. The Facility comprises a hub and spoke model, with major spokes in Bexley Wing, and Jubilee Wing (opened in 2014 and funded by the Foundation) and the Dental Hospital. The Facility conducts early phase research with leading-edge medicines and technologies across a range of diseases, with cancer particularly prominent. Trials of new drugs for the treatment of blood cancers have been particularly successful. Whilst less than the amount bid for, the NIHR funding is a 50% increase on the previous award. Funding for the full five year period (2017-2022) is subject to a satisfactory review of activity in 2019 which gives extra impetus to the drive to significantly expand the existing Facility (in Bexley and at Chapel Allerton). The Facility now has in place a significantly-strengthened clinical management team funded in-part by the Charitable Foundation, and led by the Clinical Director, Professor Chris Twelves.

The University and Trust invested significantly in cancer research, appointing four new Chairs and 10 University Academic Fellows. Leeds receives more than £100m income for cancer research and has the second largest clinical trials cancer activity in the UK. Leeds now has five Cancer Research UK programme grants totalling over £5m, demonstrating the charity’s perception of our overall scientific strength.

Despite this, the University-led bid to Cancer Research UK to retain designation as a Centre and an Experimental Cancer Medicine Centre was unsuccessful. The feedback indicated that the scale of clinical translation was not yet sufficient to warrant Centre designation. Outside London, Oxbridge and Manchester, only Newcastle, Southampton and Birmingham were designated Centres, possibly reflecting an apparent Cancer Research strategic decision to concentrate resources and suggesting that the Trust and University should develop a strategic partnership with another Centre which is demonstrably world-class (for example, the Institute for Cancer Research, London). An element of any such partnership would be to open early phase trials in Leeds using our expanded Clinical Research Facility, so that Leeds patients have increased access to potentially practice-changing research.
**Precision Medicine**

Precision (or personalised) medicine is an approach for the treatment and prevention of disease that is informed by individual variability in genes, environment, and lifestyle. The Trust and University were designated as a Precision Medicine Centre by Innovate UK, with the aim of helping UK Life Sciences industry commercialise precision medicine technologies (for example, new tests in cancer including wider use of tumour genetic testing to select appropriate treatments), building on the existing Trust NIHR Diagnostic Evidence Cooperative (one of only 4 nationally), the Trust is working with the Leeds Academic Health Partnership to create a Personalised Medicine and Health System in Leeds which would span laboratory discovery to Leeds-wide adoption of precision medicine technologies. The Trust, in partnership with Sheffield Teaching Hospitals and Sheffield Children’s Hospital, was successful in achieving designation as a Genomics Medicine Centre by Genomics England.

**Clinical Trials**

The Trust conducts a large number of clinical trials across all specialties. Performance is measured by the National Institute for Health Research (NIHR) using a series of metrics. The Trust has risen to 5th in the country for ensuring commercial trials deliver the required number of patients in the agreed time. Good performance in delivering studies attracts further commercial studies and income to the Trust. The Trust’s ranking by the NIHR in terms of number of patients recruited and studies open, is shown below;

<table>
<thead>
<tr>
<th>Key Performance Indicators</th>
<th>2015/16 (data cut 2nd January 2017)</th>
<th>2016/17 (data cut 2nd January 2017)</th>
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<tbody>
<tr>
<td>Numbers and National ranking (in brackets) for number of patients recruited, and number of studies, in NIHR Clinical Research Network portfolio</td>
<td>Patients 11,893 (9th)</td>
<td>Patients 6745 (11th)</td>
</tr>
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<td></td>
<td>Studies 491 (3rd)</td>
<td>Studies 390 (4th)</td>
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The Trust’s portfolio of studies is kept under active review to ensure a balance between delivering large simple studies and the Trust’s leading role in delivering complex studies which involve smaller numbers of patients. In order to increase opportunities for patients to participate in research, it is planned to open up to 3 large-recruiting studies in 2017; in sexual health, rheumatology and a survey of patients’ opinions about linking electronic health records to consumer data.
3. Proposal

The key issue for the Trust is to accelerate the expansion of the Clinical Research Facility in the Bexley Wing, to enable more patients to have access to leading-edge research. A two-stage plan is underway which offers major opportunities to improve the visibility of research;

- **Research and Innovation Centre**

Creation of a Research and Innovation Centre in the refurbished block 20 on the St James’s campus; this is planned to open in April 2017 and will provide an excellent opportunity for a major launch event later in 2017 which could be used as a platform to publicise Leeds flagship research programmes locally and nationally. This will then enable the vacation of office space on level 3 and level 6 in Bexley Wing which will in turn permit expansion of the Clinical Research Facility in the Bexley Wing.

- **Expansion of the Clinical Research Facility**

The expansion of the Clinical Research Facility on level 3 in the Bexley Wing, with build starting April and opening early spring 2018, will provide a nationally-competitive Facility, increasing visibility to industry, national funders and provide significant opportunities to increase commercial income.

4. Financial Implications and Risk

The total Trust annual income for research is approximately £20m and a much improved research costing and income recovery process is now in place, delivered by an expanded and dedicated research finance team. A new research costing model is increasing the recovery of Trust indirect costs. Key challenges are to increase market share of leading-edge trials and to ensure we continue to attract funding from major national flagship funders. The principal risk to both Trust and University from the loss of flagship funding (for example, Cancer Research UK Centre status) is the loss of key staff. The reputation of the Trust as a provider of world-class cancer or other specialist services is also enhanced by securing flagship programmes. These risks may significantly mitigated by the expansion of the Clinical Research Facility and the development of research partnerships as noted above.

5. Communication and Involvement

Regular reports on the progress delivering the Trust research and innovation strategy are discussed at the Board committee for research, education and training. The Trust communications team have a designated lead for research and innovation and a series of research events have been held, including two presentations given as part of the Medicine for Members programme. Social media are now in use to promote research and a comprehensive re-design of the content of the R&I webpages is underway. The launch event noted above offers an outstanding opportunity to publicise Trust research more widely.
6. Equality Analysis

The research carried out within the Trust (and the vision set out in the strategy) aims to engage equally with all patients who access Trust services. Patients are involved in the oversight of many of the key research programmes and a cohort of 15 patient research ambassadors have now been recruited from the Trust membership in order to strengthen patient engagement in Trust research.

7. Publication Under Freedom of Information Act

- This paper has been made available under the Freedom of Information Act 2000

8. Recommendation

The Board is asked to discuss the progress made in delivering the research strategy and the plans to expand the Clinical Research Facility.

Professor Stephen Smye

**Director of R&I**

12 January 2017