

Bench To Bedside

Enhancing the Competitiveness of Medical
Research in Northern Ireland

Executive Summary

Together we will beat cancer



CANCER
RESEARCH
UK

More than 9,250 people are diagnosed with cancer every year in Northern Ireland¹. Today, around half of the people diagnosed with cancer will survive for more than 10 years. This figure has doubled in the last 40 years. Cancer Research UK's ambition is to accelerate progress so that three-quarters of people survive the disease by 2034. Research has played a vital part in this progress so far and is crucial to further improve outcomes for cancer patients.

This study was conducted to analyse the state of the medical research environment in Northern Ireland and to identify policy actions to optimise it. This report uses the term "medical research" to encompass basic, translational and clinical health research across all disease areas. While the findings are reflective of the broader environment, we have focused on cancer in some areas. The report combines analysis of available data and interviews with 17 Northern Irish and nine UK medical research stakeholders.

Overall, our respondents spoke of the negative impact of a challenging financial and policy environment for research in Northern Ireland. Basic researchers are struggling to compete for funding from UK and EU sources. Additionally, workforce shortages and infrastructure issues in Northern Ireland's Health and Social Care (HSC) Trusts are impacting on the clinical research opportunities available to patients.

However, there are examples where, through supporting areas of research strength, researchers are successfully attracting major funding, such as Queen's University Belfast's status as a Movember Centre of Excellence². It is crucial that those involved in research continue to refine this focus, drawing on potential collaborations between universities, the



HSC and Northern Ireland's life sciences industry, to create world leading areas of excellence.

FINDINGS

There are several factors that enable a high-quality research environment, including: leadership, policy and collaboration; funding; infrastructure; workforce; and patient access to research.

LEADERSHIP, POLICY & COLLABORATION

Research in Northern Ireland is operating within a challenging policy environment. With the NI Executive shutdown since January 2017, it has been extremely difficult, and in some cases impossible, to enact policy change.

One example is the unpublished life sciences strategy. Our respondents spoke about having worked with the NI Executive to create a strong strategy that is not able to be published. Northern Ireland has a small but strong biotech sector and our respondents emphasised the need to capitalise on this.

Northern Ireland is the only part of the UK without a published up-to-date cancer strategy. There are several issues across the HSC that are affecting the provision of cancer research and a comprehensive strategy is needed to ensure patients get

the best standard of care, including access to research. Falling behind on the internationally recognised standard of care could significantly impact on the ability to undertake cutting edge clinical research. Cancer Research UK strongly welcomes the DoHs³ decision to commission a new 10 year cancer strategy and this needs to be put in place urgently to address these issues.

RECOMMENDATIONS

- The Department for the Economy (DfE) should act as a matter of urgency to publish the life sciences strategy. This strategy should contain actions to build upon the strengths of Northern Ireland's existing life sciences industry.
- The Department of Health (DoH) should urgently develop and implement a comprehensive cancer strategy. The strategy should contain actions to improve the clinical research environment, including:
 - That cancer data is effectively used to assess and inform the transformative improvement to cancer services.
 - Plans to embed research throughout the health and social care system in Northern Ireland, to foster a culture of research at all levels
 - An aim to increase the number of patients having a discussion about taking part in cancer research.

FUNDING

There is growing concern amongst the research community in Northern Ireland about a reducing pot of research funding. In 2011/12, the NI Executive gave £51m in research funding to Higher Education Institutions (HEIs)⁴. By 2017/18, this had fallen to £46.5m, a decrease of almost 9%. Universities rely on this underpinning Quality-Related (QR) funding for the

infrastructure and workforce that enables researchers to win competitive grants from sources such as UKRI and charities.

This level of QR funding is more than 40% lower than Scotland per capita⁵ and there is a significant need for new funding streams to bridge this investment gap. One potential new low-cost funding stream that could increase competitive research funding in Northern Ireland is the pump priming of innovative research projects. Such a stream would allow researchers to create stronger grant applications and boost the research funding entering Northern Ireland.

Researchers in Northern Ireland have benefitted from access to high levels of research funding (£113m) through the European Regional Development Fund (ERDF)⁶. It is crucial that any potential loss of funding from EU sources is quantified and urgently mitigated.

RECOMMENDATIONS

- The DfE should review the level of QR funding to Northern Ireland's universities with a view to increasing funding to comparable levels to other UK nations.
- The DoH and HSC Public Health Agency R&D should explore pump priming as a way to allow researchers to perform small, proof of principle studies that can leverage funding for larger studies.
- The DoH and DfE should urgently quantify the impact of the potential loss of EU funds as the UK leaves the EU and seek funding sources – including UKRI and others – to mitigate against this loss.

INFRASTRUCTURE

Belfast is thought to have good infrastructure access for basic research. However, significant investment into research infrastructure is needed, particularly relating to clinical research.

Whilst some investment has been made, such as in the £10m Centre of Excellence in Precision Medicine⁷, our respondents highlighted a need to establish a biomedical research centre to enable translational research. There are ongoing efforts to establish a biomedical research centre as part of the Belfast City Deal⁸ negotiations and such a facility would be a huge addition to Northern Ireland's research infrastructure.

There are also concerns about the ability of researchers to share data within HSC or across the UK. It is crucial that regulations are implemented to ensure that data sharing becomes the norm amongst Northern Ireland's researchers.

RECOMMENDATIONS

- Northern Ireland's universities, industry, the HSC and the third sector should work collaboratively with the UK Government and Belfast City Council to establish the iREACH biomedical research centre as part of the Belfast Region City Deal.
- The NI Government should urgently implement the Health and Social Care (Control of Data Processing) Act (Northern Ireland) 2016 to enable data sharing for medical research.

WORKFORCE

Northern Ireland's Universities are currently working effectively in recruiting and training PhD students. However, there is concern that a lack of opportunities for post-PhD development is causing many talented researchers to leave.

Interviewees were also concerned about the ability of research institutions to attract and retain research leaders. Whilst Northern Ireland is seen to perform well in terms of its intellectual capital compared to its size, there is a need for a greater focus of talent in areas of research

excellence to increase the resilience of the research environment.

Significant issues also exist in the training and retention of clinical academics. Whilst clinicians have access to some all-Ireland and university-based fellowships, there is currently no central mechanism to protect clinicians' time for research, which is reducing the amount of clinical research available to patients.

RECOMMENDATIONS

- Northern Ireland's research institutions should work with the DfE to create a plan to ensure that Northern Ireland is able to attract and retain world class research talent.
- DoH should work with representative bodies to create mechanisms so that clinicians interested in engaging in research are able to.

PATIENT ACCESS TO CLINICAL TRIALS

Interviewees reported that it is becoming harder to recruit patients to trials in some areas such as cancer where advances in precision medicine approaches are making many trials more complex, leading to fewer patients being eligible.

Northern Ireland had the lowest reported level of patients having a research discussion of any UK nation in the Cancer Patient Experience Survey, a figure that fell from 18% in 2016⁹ to just 15% in 2018¹⁰.

Our respondents also reported that delays in the provision of drugs are preventing some trials opening. It is important that the DoH addresses these issues to allow patients to have timely access to research.

RECOMMENDATIONS

- The DoH, HSC and Health Trusts should put systems in place to signpost ongoing clinical trials to patients.

REFERENCES

- ¹ Cancer Research UK. Cancer incidence for all cancers combined 2015. <https://bit.ly/2xumDV5> Accessed September 2018.
- ² Prostate Cancer UK (2019) Movember Centres of Excellence. <https://bit.ly/2NZFtdF>. Accessed March 2019.
- ³ Department of Health (2019) Department announces way forward on a new cancer strategy. <https://bit.ly/2Ur1vrY>. Accessed March 2019.
- ⁴ Department for the Economy (2019) University recurrent research grant summary tables. <https://bit.ly/2HAaTpT>. Accessed March 2019.
- ⁵ Scottish Funding Council (2019) Funding Allocations. <https://bit.ly/2VYNpPc>. Accessed March 2019.
- ⁶ Technopolis Group (2017) The role of EU funding in UK research and innovation. <https://bit.ly/2xWG9Z8>. Accessed March 2019
- ⁷ HSC R&D (2019) Precision Medicine Centre of Excellence. <https://bit.ly/2T4euP0>. Accessed March 2019.
- ⁸ Belfast City Council (2019) Belfast Region City Deal - it's a big deal. <https://bit.ly/2TKGBa9>. Accessed March 2019.
- ⁹ HSC Public Health Agency (2015) Northern Ireland Cancer Patient Experience Survey: 2015 All Trusts Report. <https://bit.ly/29bZlcr> Accessed March 2019.
- ¹⁰ HSC Public Health Agency (2019) Northern Ireland Cancer Patient Experience Survey: 2018 All Trusts Report. <https://bit.ly/2EY6Ccl>. Accessed March 2019.