FULL TEAM AHEAD: UNDERSTANDING THE UK NON-SURGICAL CANCER TREATMENTS WORKFORCE

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CANCER RESEARCH UK

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ABOUT CANCER RESEARCH UK

Cancer Research UK is the world's largest independent cancer charity dedicated to saving lives through research. It supports research into all aspects of cancer and this is achieved through the work of over 4,000 scientists, doctors and nurses. In 2016/17, we spent £432 million on research institutes, hospitals and universities across the UK. We receive no funding from the Government for our research and are dependent on fundraising with the public. Cancer Research UK wants to accelerate progress so that three in four people survive their cancer for 10 years or more by 2034.

FULL REPORT

For more information or for a full copy of the report, visit:

cruk.org/non-surgical-treatments-workforce

EXECUTIVE SUMMARY

More than 360,000 people in the UK are diagnosed with cancer each year[i]. By 2022 it is projected that this figure will reach 422,000 people[ii,iii]. Yet while more people will develop cancer, survival is improving. Currently half of all cancer patients survive their disease for 10 years or more. Cancer Research UK wants to accelerate progress so that 3 in 4 people survive by 2034. Early diagnosis followed by access to the best, evidence-based treatment is critical to achieve this.

As we strive towards earlier diagnosis of cancer, treatments will change. Increasingly, treatments are tailored to an individual's cancer; combinations of treatment types are being used to target cancers differently and there are more treatment options than ever before. Additionally, an ageing population, often with comorbidities, means the treatment of cancer has become more complex.

As such, ensuring better access to treatments is rightly a priority in the cancer strategies for England[iv], Scotland[v], and Wales[vi]. Northern Ireland does not have an up-to-date cancer strategy at the point of publishing this report. Having the optimal workforce is fundamental to ensuring treatment can be provided to meet the needs of patients.

OUR APPROACH

Cancer Research UK commissioned this research study to investigate the current and future needs, capacity, and skills of the non-surgical oncology workforce to provide optimal treatment to the UK population. The research combined data analysis of current workforce data; a survey of the workforce across the UK (> 2500 responses); in-depth interviews with workforce staff; and expert advice from health professionals.

WE MUST IMPROVE HOW WE USE THE SKILLS AND EXPERIENCE OF THE WORKFORCE, ESPECIALLY IN LIGHT OF FUTURE TREATMENT DEMANDS

We knew at the start of the research that data on staffing levels is limited across the UK. This makes it difficult for health bodies to make well-informed decisions about workforce planning[vii,viii]. For example, in England healthcare providers report staffing requirements based on projected budgets rather than what is needed to deliver best practice care to patients.

Therefore, we have developed a 'best practice treatment model'. This model was developed through extensive clinical consultation, to understand how patients should ideally be treated, and the workforce needed to do that.

This gives us a picture of actual patient need in cancer services, highlighting the difference between the modest vacancy rates in the sector and the widely reported pressures and worsening performance in UK cancer services. Our work was also informed by the workforce planning framework developed by the Health Foundation[ix].

We consulted people affected by cancer

throughout the report (on its scope, methods and recommendations) to ensure that the views of those being treated are represented in this research.

This report presents the findings for the workforce providing systemic anti-cancer therapy (such as chemotherapy and immunotherapy); hormone therapy; stem cell therapy; and radiotherapy. Surgical services for cancer have been explored in a previous report[x].

Teamwork is fundamental to the delivery of these cancer treatments. The non-surgical cancer treatments workforce delivers treatments through shared responsibility and expertise. This report's findings and recommendations are therefore focused on how these teams can continue to deliver excellent treatment and patient care and use each of their skills and expertise to benefit other members of their team.

FINDINGS

CURRENT STAFF SHORTAGES

Based on available data, there were more than 9,000 health professionals working in non-surgical oncology treatments services in 2015. We were unable to develop comprehensive workforce figures in the UK due to the incomplete data sets and lack of systematic collection of these workforce groups, particularly for nurses and pharmacists. This includes inconsistency of job titles and variations between roles, as well as lack of accurately identified work areas, such as nurses working in cancer care.

The workforce (in absolute terms) has been growing over recent years, although not to the same degree as demand for treatment. Treatment demand has increased due to the growing number of patients diagnosed with cancer (incidence) or living with the disease, and the complexity of the treatments they need. Trend data is available for medical and clinicial oncologists and therapeutic radiographers. This shows that staff numbers in these three roles combined have grown by nearly 4% per year on average over the last 3 years. However, cancer incidence (new cancer diagnoses) alone is increasing by 2% per year. The combination of cancer incidence with those already diagnosed and continuing to have cancer treatment would mean that this increase in staff would not meet the patient demand for cancer treatment.

The current vacancy figures seem relatively low. For example, the vacancy levels for clinical and medical oncologists are 3.3% and 5.3% respectively. But our research suggests that these are underestimates of the true workforce gaps, because:

- Many posts have been vacant for up to two years.
- Vacancy rates only reflect current vacancies – services often remove a job advert if they fail to fill the post and redesign the team structure to deliver the service instead.

During our site visits, it was also widely recognised that there are not enough health professionals trained to fill all vacant posts.

Nearly 3 in 4 (73%) of our survey respondents identified staff shortages as a barrier to providing efficient cancer treatments and excellent patient experience. This results in:

- **Insufficient capacity to undertake clinical research**

Staff do not feel they have capacity to undertake clinical research. This included not having enough staff to deliver the clinical trials as well as lack of time to plan and set up the research.

"Without time to research and develop

treatments, it will feel like the early 90s again, when we were really behind the rest of Europe and our techniques were out of date. [In those days] our outcomes were right at the bottom of the table"

Head of Radiotherapy Physics

- **Downgrading of patient experience**

Whilst most staff felt able to deliver cancer treatments in line with standard protocols, 43% of survey respondents did not feel they had enough patient-facing time to deliver best practice care to patients, including providing emotional support or comprehensive information about the treatments.

- **Missed opportunities for service improvement**

Interviews and survey respondents from all workforce groups mentioned that they sacrifice time which should be set aside for service improvement, implementing innovation, and training and development, to deal with increased demand for treatment.

"My job is purely trying to keep the wheel turning. I would love to develop my service which is suffering from a severe lack of research trials and opportunities for patients"

Skin medical oncologist

- **Less frequent sharing of best practice with other cancer treatment providers**

Neighbouring centres often find themselves competing for scarce staff numbers in the local labour market, and in some cases this means competition is more likely than collaboration.

- **Short- vs. long-term job planning**

Workforce shortages limit the capacity of the services to plan for the future, focusing more on reacting to current issues than long-term planning. Despite treatments becoming more complex and the volume of patients increasing, staffing patterns have therefore rarely adapted to reflect this.

- **Inefficient use of the workforce's skills and experience**

During our site visits, many health professionals highlighted the problems with lack of administrative staff. In some instances, therapeutic radiographers had been asked to man the reception. This is an ineffective use of highly qualified staff.

- **Decreased staff wellbeing and morale and increased working hours**

All workforce groups reported that they were working more than their contracted hours. 43% of medical oncologists in our survey worked more than 8 additional hours per week.

Discussions with our panel of experts also highlighted concerns that these shortages would be exacerbated in the future due to changes occurring at the moment. Changes to funding for nurses, therapeutic radiographers, and clinical scientists heighten the importance of understanding how changes to training pathways will impact the workforce supply in the future.

The Royal College of Nursing report that nursing applications have decreased by a quarter following the removal of the student bursaries in England. The Institute for Physics and Engineering in Medicine (IPEM) also highlight concerns around low uptake of clinical technology places in England and Wales.

RECOMMENDATIONS

1. Health Education England, and its equivalents in the devolved nations, should use our 'best practice treatment model' to project required workforce numbers based on patient demand, not on affordability.

2. Health Boards and Cancer Alliances should report staff shortages to health

workforce bodies, such as Health Education England, based on staff needed to meet patient demand not vacancy figures.

3. Health Education England must address current and future staff shortages by:
a. Increasing training places for clinical and medical oncology;
b. Reviewing training pipelines for clinical technology with IPEM and the Department of Health; and
c. Reviewing how the removal of student bursaries for nurses and therapeutic radiographers is affecting workforce projections in 2018/19.

4. NHS Digital, and its equivalents in the devolved nations, should work with relevant professional bodies to develop more standardised role descriptions and codes, particularly in nursing and pharmacy.

PREPARING FOR THE FUTURE

More staff will also be needed to deliver non-surgical cancer treatments in the future. We were not able to account for the impact of shifting diagnosis to an earlier stage, but this should be further examined. With treatment demand increasing and a patient population who will have more complex needs, particular attention needs to be paid to the following changes.

- **Dramatic changes in treatments**

The workforce will need to be equipped for the rapid growth in the use of immunotherapy, and novel combinations such as radiotherapy with immunotherapy.

- **Development of new technologies**

New software will help automate some work. However, some new technology makes the treatment techniques more complex and time-consuming to plan.

Changes to treatment delivery

Some treatments, such as chemotherapy, will be provided closer to the patient's home. This will affect the recruitment practices and ways of working across the UK.

RECOMMENDATIONS

5. The UK Radiotherapy Board and the UK Chemotherapy Board should review how future changes to cancer treatments will impact staff numbers and skills required.
6. Further research is needed to understand the impact of early diagnosis initiatives and improvements in technology on when and how patients are treated, and the workforce implications of this.

SKILLS MIX CAN HELP ALLEVIATE PRESSURE

Teamwork is fundamental to the successful delivery of cancer treatment. The non-surgical cancer treatment workforce already share their workload and responsibilities. Teams develop new ways of safely providing these treatments to patients using different team members' skills and experiences.

The importance of implementing innovative ways to better utilise the mix of skills within the team – known as skills mix approaches – was a key finding of this research. Better use of skills mix approaches will require changes to the size and skills of different workforce groups.

We identified 3 key skills mix opportunities:

- Training more advanced clinical practitioners;
- Increasing implementation of non-medical prescribing; and
- Non-medical professionals taking on responsibility for:
  - Treatment review;

- Radiotherapy treatment planning; and
- Radiotherapy plan checking.

However, more capacity is needed in the current workforce to adopt these changes. For example, increasing non-medical prescribing will require more training for pharmacists. The knock-on effect of this is that oncologists will need more time to train pharmacists. Pharmacists will also need additional time in their schedule to learn new skills. As a result, the service delivery model needs to adapt to this.

The professions that will benefit most from increased capacity and use of skills mix approaches are:

- **Pharmacists** – more pharmacists trained in non-medical prescribing would enable prescribing to be shared, freeing up time for oncologists.
- **Therapeutic radiographers** – more therapeutic radiographers would enable more clinical research in radiotherapy and better implementation of complex treatment techniques.
- **Clinical technologists –** more clinical technologists would enable more specialisation in dosimetry and complex planning.

Further changes that would facilitate skills mix include:

- Professional bodies providing more guidance on skills mix approaches.
- Cancer services exploring further implementation of open access, stratified and telephone follow-ups.
- Ensuring future health service contracts for the workforce groups in scope reflect current and increasing future workload.
- Increased professional and senior buy-in at cancer treatment service level, facilitating implementation of skills-mix approaches.

RECOMMENDATIONS

7. NHS England should share the 3 key skills mix opportunities identified in this research with Cancer Alliances to spread innovation and encourage best practice.

8. The UK Radiotherapy Board and UK Chemotherapy Board should work with the Department for Education and equivalent bodies in the devolved nations to understand how apprenticeship standards can be used to improve skills mix implementation.

9. The UK Radiotherapy Board and UK Chemotherapy Board should agree the standards needed for skills mix approaches and how to implement follow-up and open access approaches.

10. The Department of Health and equivalent bodies in the devolved nations should ensure that contracts for health professionals covered in this research include protected time for Supporting Professional Activities such as service improvement, training, and clinical research.

Cancer services across the UK must address workforce challenges to optimise treatment delivery. This research demonstrates the importance of workforce planning driven by patient demand, not what is affordable according to hospitals' budgets.

Cancer Research UK believes that workforce planning for providing cancer treatment should be based on our 'best practice' treatment model and the Health Foundation's framework. This will enable an improved understanding of true patient demand and the development of comprehensive UK workforce strategies.

[i] Annual average number of cases of all cancers excluding non-melanoma skin cancer (ICD-10 C00-C97, excl. C44) in the UK between 2013 and 2015.
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[iv] NHS England. Achieving World-Class Cancer Outcomes: Taking the strategy forward. London: NHSE; 2016
[v] The Scottish Government. Beating Cancer: Ambition and Action. Edinburgh: The Scottish Government; 2016.
[vi] Wales Cancer Network. Cancer delivery plan for Wales 2016-2020. Cardiff: Wales Cancer Network; 2016
[vii] National Audit Office (2016) *Managing the supply of NHS clinical staff in England*.
[viii] Health Foundation (2016) *Fit for purpose? Workforce policy in the English NHS.*
[ix] Health Foundation (2016) *Fit for purpose? Workforce policy in the English NHS.*
[x] Cancer Research UK (2014) An evaluation of cancer surgery services in the UK.