

Early diagnosis

Question

What actions should the government and the NHS take to help diagnose cancer at an earlier stage? (Select the 3 actions that would have the most impact)

- Improve symptom awareness, address barriers to seeking help and encourage a timely response to symptoms
- Support timely and effective referrals from primary care (for example, GPs)
- Make improvements to existing cancer screening programmes, including increasing uptake
- Increase diagnostic test access and capacity
- Develop and expand interventions targeted at people most at risk of developing certain cancers
- Increase support for research and innovation
- I don't know
- Other (please specify)

Please explain your answer. (Do not include any personal information in your response. Maximum 500 words.)

It is essential that we address the workforce challenges among diagnostic staff, especially among Medical Physics and Clinical Engineering, in order to expand capacity. These professionals are essential, for example, in maintaining, calibrating, checking and operating complex imaging equipment to diagnose cancer. AI is now enabling the NHS to provide more targeted screening for certain cancers. Genomics, developed by healthcare scientists, has been key to this. This technology however, requires a sufficient number of Medical Physicists and Clinical Engineers to develop, evaluate and implement new technology safely, effectively and efficiently.

Research and development require funding and there is a current barrier to this. Supporting academic research and industrial development of new technology, including through support for tech start ups, would pay for itself in the long term through reducing NHS costs and reducing waiting times. Support for scientists to innovate especially funding for R&D and career development needs to be improved.

Medical Physicists and Clinical Engineers are a vital and unique professional group in the development of new technologies. They are involved in the research and development of these technologies, but also in their safe, effective and efficient procurement and use. These scientific pieces of equipment need scientists.

In addition to the workforce challenges, there are significant disparities in provision of diagnostic services depending on geographical location. Financial support should be extended not only to research and development of new technology, but also to maintain and expand existing diagnostic services. It is essential that these are properly staffed, including with Medical Physicists and Clinical Engineers, to ensure safe standards and regulatory compliance.

Treatment

Question

What actions should the government and the NHS take to improve access to cancer services and the quality of cancer treatment that patients receive? (Select the 3 actions that would have the most impact)

- Increase treatment capacity (including workforce)
- Review and update treatment and management guidelines to improve pathways (processes of care) and efficiency
- Improve the flow and use of data to identify and address inconsistencies in care
- Improve treatment spaces and wards, including facilities available to carers
- Improve communication with patients, ensuring they have all the information they need
- Increase the availability of physical and mental health interventions before and during cancer treatment
- Increase the use of genomic (genetic) testing and other ways of supporting personalised treatment
- I don't know
- Other (please specify)

Please explain your answer. (Do not include any personal information in your response. Maximum 500 words.)

It is essential to increase treatment capacity by supporting capital investment in new technology and supporting efforts to increase and upskill the workforce. Specifically:

- Establish an independent, accountable strategic planning group to create and deliver a National Plan for Radiotherapy, investigating and clarifying reasons for variation in access and quality / outcomes, informing long-term policy and investment in equipment and workforce across all 61 NHS radiotherapy providers.
- Ring-fenced funding for replacement of all Linacs aged over 10yrs (as has been adopted in Scotland).
 - Ensures all providers can maximise treatment capacity with efficient, modern Linacs. Clearing the backlog of aged Linacs requires investment of around £242 million (£70 million has been ring-fenced in 25/26). Subsequently, ongoing and efficient replacement of the national

linac fleet would require around £80 million a year of ongoing investment.

- Adoption of new technology.
 - Radiotherapy is a highly technical field with fast-moving improvements. In 2012, NHSE invested £15 million in radiotherapy to implement IMRT, which allowed every centre in England to adopt this technology and successfully improved outcomes for patients. A similar investment of £50 million would allow all England providers to adopt 'online adaptive', the new technology that will reduce side-effects for patients.
 - Molecular therapies are also at the cutting edge of treatment and should also be supported.
- Adopt a tariff reimbursement system that incentivises efficient delivery and adoption of new technology and pathways that benefit patients. Move away from the current irregular, unpredictable funding streams that disincentivise progress and make strategic planning impossible for providers.
- Address the huge variation in radiotherapy access across the UK by supporting the safe and robust establishment of new Linac provision in areas currently distant from radiotherapy services.
- Support efforts to train more radiotherapy staff, including radiotherapy engineers, radiographers and clinical oncologists.

The Government should commit to Surface Guided radiotherapy as standard for all thorax/abdominal radiotherapy treatments. This provides the highest quality of care for patients but is currently funded only by charities. This could either use ring-fenced funds or, ideally, be incorporated into a new tariff reimbursement system. In order to delineate the patient's organs ahead of radiotherapy, there should also be a fund for all radiotherapy centres to access auto-contouring software. As manual contouring be immensely time consuming and costly in terms of staff time. Reports that the previous fund for this AI technology has been scrapped are deeply concerning.

Living with and beyond cancer

Question

What can the government and the NHS do to improve the support that people diagnosed with cancer, treated for cancer, and living with and beyond cancer receive? (Select the 3 actions that would have the most impact)

- Provide more comprehensive, integrated and personalised support after an individual receives a cancer diagnosis and (if applicable) after treatment
- Improve the emotional, mental health and practical support for patients, as well as their partners, family members, children and carers
- Offer targeted support for specific groups, such as ethnic minority cancer patients, children and bereaved relatives

- Increase the number and availability of cancer co-ordinators, clinical nurse specialists and other staff who support patients
- Increase the support to hospice services and charities who provide care and support for patients
- Improve access to high-quality, supportive palliative and end-of-life care for patients with incurable cancer
- I don't know
- Other (please specify)

Please explain your answer. (Do not include any personal information in your response. Maximum 500 words.)

There is a need for a universal care record that can be accessed freely by GPs, hospitals and clinics. Apart from the current IT barriers to this, with different organisations using different systems, a barrier that could be easily removed would be the implementation of a national NHS information governance agreement – across the UK - compulsory for all delivering patient care.

There should be more funding and properly planned follow up of patients, across multi-disciplinary teams. Tools such as Patient Reported Outcome Measures could be used to assist with directing the most appropriate support to the right people at the right time.

Artificial Intelligence and big data analysis provide significant opportunities for population health, diagnostic and treatment programme transformation. Other technologies analyse population data to provide targeted diagnosis of serious conditions, such as increasing early cancer diagnosis rates. Medical Physics and Clinical Engineering professionals are highly educated and trained in mathematical techniques, risk-benefit analysis, optimisation techniques and regulatory compliance and should be at the forefront of deployment of this technology transformation programme.

Apps are increasingly popular among patients and are often developed in partnership with industry and academia. For example, there are now AI enabled apps for detecting skin cancer. Safeguarded funding for academic research and tech start ups would be a key enabler of this. Medical Physicists and Clinical Engineers will be required for quality assurance and implementation of these technologies, but they offer the potential for significant patient benefit. Many of these apps are being developed by tech start ups and Clinical Engineers are supporting the development of such local start ups up and down the country. They provide regulatory support, and help developers understand how they can deploy their solutions in the NHS system.

Research and innovation
Question

How can the government and the NHS maximise the impact of data, research and innovation regarding cancer and cancer services? (Select the 3 actions that would have the most impact)

- Improve the data available to conduct research
- Improve patient access to clinical trials
- Increase research into early diagnosis
- Increase research into innovative treatments
- Increase research on rarer and less common cancers
- Speed up the adoption of innovative diagnostics and treatments into the NHS
- I don't know
- Other (please specify)

Please explain your answer. (Do not include any personal information in your response. Maximum 500 words.)

Government should urgently re-establish the relatively modest funding required for national cancer trial coordination, to encourage widespread adoption of clinical trials and reverse the ongoing decline in new trials being opened in the UK.

It should facilitate the establishment of outcomes data collection from all providers, encouraging widespread adoption of rapid learning from real-world data. This is essential because radiotherapy is a highly technical field with fast-moving technological developments. It is therefore often impractical to evaluate these developments using traditional clinical trial approaches, both because a controlled approach is ethically challenging and because trials would take so long to report.

An investment of £50 million would allow all England providers to adopt 'online adaptive', the new technology that will reduce side-effects for patients.

Funding for online adaptive would provide an ongoing benefit for many years after the initial spend. Over 100,000 patients per annum receive radiotherapy, online adaptive RT would bring benefit to many of them.

Consistent measurement and interoperable standards are essential to high quality cancer care, something called for by our partners at the National Physical Laboratory and which IPEM would support.

Inequalities

Question

In which of these areas could the government have the most impact in reducing inequalities in incidence (cases of cancer diagnosed in a specific population) and

outcomes of cancer across England? (Select the 3 actions that would have the most impact)

- Improving prevention and reducing the risk of cancer
- Raising awareness of the signs and symptoms of cancer, reducing barriers and supporting timely response to symptoms
- Reducing inequalities in cancer screening uptake
- Improving earlier diagnosis of cancers across all groups
- Improving the access to and quality of cancer treatment
- Improving and achieving a more consistent experience across cancer referral, diagnosis, treatment and beyond
- Improving the aftercare support for cancer patients
- I don't know
- Other (please specify)

Please explain your answer. (Do not include any personal information in your response. Maximum 500 words.)

The Government should invest in a larger number of more cancer centres, including local treatment centres for treatments like radiotherapy. There is a target that no one should have to travel more than 45 minutes for treatment, but this is currently not the case for many. Local treatment should be facilitated wherever it can be safely and efficiently provided. This would also support the Government's aim of moving care closer to people's homes. This must be supported by adequate staff, including Medical Physicists and Clinical Engineers, to ensure safe standards and regulatory compliance.

The existing Cancer Drugs Fund should be replaced by a Cancer Treatment Fund supporting treatments other than chemotherapy.

Priorities for the national cancer plan

Question

What are the most important priorities that the national cancer plan should address? (Select the 3 most important priorities)

- Prevention and reducing the risk of cancer
- Raising awareness of the signs and symptoms of cancer
- Earlier diagnosis of cancer
- Improving the access to and quality of cancer treatment, including meeting the cancer waiting time standards
- Improving patient experience across cancer referral, diagnosis, treatment and beyond

- Improving the aftercare support for cancer patients
- Reducing inequalities in cancer incidence, diagnosis and treatment
- Other (please specify)

Please explain your answer. (Do not include any personal information in your response. Maximum 500 words.)

To ensure that the Government's aspirations for improved cancer prevention, treatment and care are met, it is essential to address shortfalls in the Medical Physics and Clinical Engineering workforce urgently.

Recommended staffing models show the MPCE workforce requires at least 900 additional staff to come from additional training opportunities, which will be impossible to achieve by the meagre increase of training places pledged in the most recent NHS Workforce Plan. At such a rate it would take close to 30 years to reach the required staffing levels.

IPEM's official workforce statement, published in 2023, showed that, across all MPCE specialisms surveyed in recent years, there is an average 10% vacancy rate, with an 8% rate in radiotherapy, 12% in nuclear medicine and 15% in Diagnostic Radiology and Radiation Protection.

At the same time, of the specialisms that do have a regular intake of trainees, IPEM data has shown the number of trainees entering the workforce is not sufficient to maintain it.

AI is now enabling the NHS to provide more targeted screening for certain cancers. Genomics, developed by healthcare scientists, has been key to this. AI and big data analysis provide significant opportunities for population health, diagnostic and treatment programme transformation. There are multiple technologies to support diagnostic imaging which significantly increase capacity or reduce staff workload in interpretation of diagnostic images. Other technologies analyse population data to provide targeted diagnosis of serious conditions, such as increasing early cancer diagnosis rates.

In order to move care from hospital to patients' communities or homes, there is a need for a universal care record that can be accessed freely by GPs, hospitals and clinics. Apart from the current IT barriers to this, with different organisations using different systems, the implementation of a national NHS information governance agreement, compulsory for all delivering patient care would help.

Image data (e.g. CT datasets) can be processed using powerful analysis methods, including AI, to extract the maximum possible information. This could lead to earlier detection of worrying features. Access to new technologies which enable largescale and longitudinal analysis of referral data and clinical outcomes has also increased in recent years; this could be used to identify opportunities for streamlining patient workflow, to identify limited impact diagnostic tests or to identify at risk patients. Medical Physics support is essential to ensure effective and legal implementation of both these advances and would require investment in Medical Physics staffing across all specialisms.

Data on referral reasons and outcome could be used to identify limited impact diagnostic tests or to identify at risk patients. Effective and legal implementation of these advances needs medical physicists.

There should be a more localised cancer service, including for treatments that require large equipment, such as Linacs. This would move care closer to people's homes and improve their quality of care. This should be supported by a rolling programme to replace older equipment as it comes to the end of its life, in addition to addressing the backlog which is now being funded.