

Evidence Brief: Cancer

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Produced by the HEE Knowledge Management team Evidence Briefs offer a quick overview of the published reports, research and evidence on a workforce-related topic. A starter for 10 on the evidence if you will.

Please acknowledge this work in any resulting paper or presentation as:

Evidence Brief: Cancer. (February 2021). UK: Health Education England Knowledge Management Team

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Key publications – the big picture

[Cancer services recovery plan](#) NHS England, December 2020

The coronavirus pandemic has presented major challenges for all healthcare systems. At the start of the pandemic, this resulted in some people facing longer waits for diagnosis, some treatments being delivered in different ways or being interrupted or stopped on the grounds of clinical safety, and some follow-up care being disrupted. One of the most significant impacts was a sharp reduction in the number of people coming forward and being referred urgently with suspected cancer and referred from screening programmes.

[Estimating the cost of growing the NHS cancer workforce in England by 2029](#) Cancer Research UK, October 2020

Whilst all seven professions will require continued investment to maintain current growth trends, this modelling indicates that this will not be enough and that additional investment will be required. The modelling also contributes important information about which workforces will require the most significant interventions by HEE if they are to grow by 45 per cent, as well as an estimate of the associated specialist training costs of such interventions. In addition to HEE's important role

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in securing staffing, the report also explains that other parts of the health sector, particularly NHS trusts, also play a role. While three different scenarios for increasing the workforce are set out, external factors such as the impact of COVID-19 will likely have significant implications for the NHS's ability to attract more staff through certain routes. This study will allow policymakers to consider the relative costs and feasibility of alternative options.

[Delivering the early diagnosis of cancer PCN specification: Getting started and learning from others](#) Cancer Research UK & NHS Confederation PCN Network, September 2020

The NHS Long Term Plan's ambition for early cancer diagnosis is that by 2028, the proportion of cancers diagnosed at stages 1 and 2 will rise from around half now to three-quarters of cancer patients. Achieving this will mean that from 2028, 55,000 more people each year will survive their cancer for at least five years after diagnosis. For 2020/21, both the (revised) quality and outcomes framework (QOF) quality improvement (QI) indicators on the early diagnosis of cancer and the early cancer diagnosis primary care network specification recognise the pivotal role that GPs play in diagnosing cancer earlier, and focus on similar areas.

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[Clinical oncology: UK workforce census report 2019](#) Royal College of Radiologists, June 2020

The clinical oncology UK workforce census report provides a unique profile of the clinical oncology workforce in the UK. This year's figures highlight the ongoing workforce shortages, particularly at consultant grade, and indicate that there are insufficient UK trainees to fill vacancies.

[Early detection and diagnosis of cancer: A roadmap to the future](#) Cancer Research UK, 2020

The roadmap identifies major challenges and proposes addressing them through funding new research and technology innovation, investing in platforms and data access to support such research, developing new models of healthcare and engaging the public and patients meaningfully in designing the solutions.

[Radiotherapy Radiographic Workforce UK Census 2019](#) The College of Radiographers, 2020

The College of Radiographers (CoR) carried out a census of the radiotherapy radiographic workforce in the UK as of the census date 1 November 2019. The

objectives were to establish the size, structure, nature and vacancy rate of the workforce. This document presents an analysis of the results and compares them to similar surveys carried out annually from 2010 to 2018.

[Clinical radiology UK workforce census 2019 report](#) Royal College of Radiologists, April 2020

The Royal College of Radiologists' (RCR) annual radiologist workforce report highlights the UK's current and predicted future shortage of imaging doctors and urgently calls for more funding for trainees and better NHS retention and recruitment.

[Diagnostic Radiography Workforce UK Census 2019](#) Society & College of Radiographers (SCoR), May 2020

This report presents an analysis of an online census of the diagnostic radiography workforce in the UK run by the CoR in November and December 2019.

Respondents were asked about the size and nature of their diagnostic radiography workforce. The results of this census will inform the work of professional bodies, workforce planners and commissioners/providers of radiography education.

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[Securing a cancer workforce for the best outcomes: The future demand for cancer workforce in England](#) Cancer Research UK, November 2018

This report explores how predicted changes in services would impact on the need for staff in the future. They largely reflect technology and innovation, with some service model changes also considered. They do not reflect all the potential changes in the health service, but capture those which were considered to have the most significant impact on cancer services.

[Unfinished business: an assessment of the national approach to improving cancer services in England 1995-2015](#) Health Foundation, November 2018

This report looks at progress in cancer care over two decades. It finds that progress has been made on reducing mortality, and improving the chances of survival and the experience of care, for people in England diagnosed with cancer. See section 4.6 “Workforce and the professional bodies”.

[Meeting pathology demand: histopathology workforce census](#) Royal College of Pathologists, September 2018

The report highlights the intense pressures that histopathologists face from increased workloads, such as new NHS screening programmes. In addition, services are facing more complex work as personalised medicine develops and guides new therapies. Outdated IT systems compound these pressures.

[Cancer Research UK workshop on AI and the diagnostic workforce](#) Cancer Research UK, June 2018

It is important that this workforce plan takes into account the future impact of new technology such as AI, which has the potential to be used in clinical pathways - including those involved in cancer diagnosis. It is often assumed that AI could streamline or improve certain aspects of the diagnostic process, helping to alleviate pressures associated with staff shortages and freeing up valuable time for staff to focus on other activities, including patient care, service improvement and research. We wanted to explore whether this assertion was true, how far away from current practice it was, and what the implications were for workforce planning.

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[*Cancer Workforce in England: a census of cancer, palliative and chemotherapy speciality nurses and support workers in England in 2017*](#)
Macmillan Cancer Support, April 2018

Findings of its census of specialist cancer nurses and support workers, the first in depth investigation into the cancer nursing and support workforce in England since 2014.

[*Full Team Ahead: Understanding the UK non-surgical cancer treatments workforce*](#)
Cancer Research UK, December 2017

This report outlines findings and recommendations on research into the support and training requirements of the non-surgical oncology workforce. It finds that whilst the workforce has grown in absolute terms, it has not done so in line with the growth in demand for treatment. The report highlights the need for improved workforce planning in this area to address current and future staff shortages and to develop standardised role descriptions.

[*Facing the Facts, Shaping the Future: a draft health and care workforce strategy for England to 2027*](#) Health Education England, December 2017

The NHS needs radical action to improve working conditions, boost training and retention and become a 'model employer' for staff, a report on the future of the health and care workforce has concluded. Chapter looks at "Cancer Services".

[*Cancer workforce plan – Phase 1 – Delivering the cancer strategy to 2021*](#) Health Education England, December 2017

Health Education England (HEE) has produced a comprehensive cancer workforce plan that sets out how it will make sure the NHS has enough staff with the right skills to deliver improvements for people affected by cancer over the next three years.

[*From the frontline: workforce pressures in the NHS*](#)
Macmillan Cancer Support, September 2017

Current workforce pressures are affecting the level of care being delivered to cancer patients, according to a new report From the Frontline by Macmillan Cancer

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Support. A survey undertaken by nfpSynergy for Macmillan of over 250 GPs and nurses working in primary care across the UK, found that over half (52%) are not confident the NHS workforce is able to provide adequate care to cancer patients, given the current pressures it faces.

[Read a KM summary of this report](#) (Office365 log in details required)

[*The General Practice Nursing Workforce Development Plan*](#) Health Education England, March 2017

This report promotes the importance of general practice nursing, as well as providing details of potential workforce issues and provides appropriate recommendations. It sets out clear recommendations to improve the recruitment, retention and return of the general practice nursing workforce.

[*Thinking Differently: Macmillan's vision for the future cancer workforce in England*](#)
Macmillan Cancer Support, February 2017

In setting out our vision, this report examines the current challenges facing the cancer workforce. These include gaps in key roles such as Clinical Nurse

Specialists (CNSs), inefficient use of specialist skills, and poor coordination and communication leading to lack of support both for recovery and at end of life.

[*The Radiography Workforce: Current Challenges and Changing Needs*](#) Society of Radiographers, December 2016

Imaging plays a central role in modern healthcare, with almost all patient pathways reliant on an effective and efficient service to improve patient experience and outcomes.

[*Fit for the Future – public Health People: a review of the public health workforce*](#)
Public Health England, May 2016

This review outlines 5 important themes that underpin the response to developing a workforce for 2021 and provides a clear pathway and plan to achieve the 'new' workforce.

Case Studies

[West Yorkshire and Harrogate Cancer Alliance: tackling lung cancer](#) NHS Long Term Plan, 2019

The Cancer Alliance is taking a whole system approach to *Tackle Lung Cancer* in areas with the lowest lung cancer survival rates and highest smoking prevalence.

[Diagnosing lung cancer earlier in Manchester](#) NHS Long Term Plan, 2019

A pilot, offering smokers and ex-smokers free health checks and on-the-spot scans, has quadrupled the number of lung cancers diagnosed at an early stage. The approach targets lung cancer testing at populations who are most at risk, using mobile scanners and teams in everyday places such as supermarket car parks.

[Supporting people to live well with and beyond breast cancer](#) NHS Long Term Plan, 2019

University Hospitals Plymouth NHS Trust work with a range of agencies to provide personalised follow-up care that aims to reduce the impact of cancer and its treatment on people's health and wellbeing. Felicity Farah, describes how this support has helped her following her diagnosis of breast cancer in March 2018.

[Training and Education for Domiciliary Care Staff in End of Life Care](#) eWIN, 2016

Wirral Metropolitan College Health and Social Care team have produced a 2 day course "Introduction to the principles of End of Life Care" with support, help, advice from the Wirral End of Life Care facilitators and Cheshire and Merseyside Cancer Network. To date 8 programmes have been delivered by college tutors to a total of 130 staff with very positive feedback from both the attendees and their managers. In almost all cases people attending the course feel they have increased confidence, skills and knowledge and most feel they will benefit from the training and apply it in practice.

HEE Star

More resources and tools are available in the "**Cancer**" section of the HEE Star:

<https://www.hee.nhs.uk/our-work/hee-star>

Statistics

You can find relevant statistics on the Health and Care Statistics Landscape under "**Cancer**"

<https://gss.civilservice.gov.uk/hc-statistics-landscape/>.

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Cancer Research UK also have a wealth of [statistics for the UK](#).

Published Peer Reviewed Research

New and Specialist Roles

[Trends in the delivery of care to oncology patients in the United States: Emphasis on the role of pharmacists on the healthcare team](#) Journal of Oncology Pharmacy Practice, January 2021

Anticipated increases in demand for oncology pharmacists strongly suggest the need for more PGY2 oncology residency programs and on-the-job oncology training programs. Oncology pharmacists are currently involved in many clinical and administrative functions including multidisciplinary management. While a core set of clinical functions has been identified, oncology pharmacists must prepare for the increased use of oral oncology agents and immunotherapy. Pharmacist involvement in value-based reimbursement and other data-based quality outcome measurements should be increased to optimize involvement in team-based patient care.

[What are the motivating and hindering factors for health professionals to undertake new roles in hospitals? A study among physicians, nurses and managers looking](#)

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[at breast cancer and acute myocardial infarction care in nine countries](#) Health Policy Journal, October 2018
Many European countries experience health workforce skill-mix changes due to population ageing, multimorbidity and medical technology. Yet, there is limited cross-country research in hospitals. Managers need to know the motivational factors of their employees and enabling versus hindering factors within their organisations to govern change effectively.

[Acceptance of the Advanced Practice Nurse in Lung Cancer Role by Healthcare Professionals and Patients: A Qualitative Exploration](#) Journal of Nursing Scholarship, September 2018

Athens log-in required

The purpose of this study was to explore the acceptance of a novel role, the advanced practice nurse in lung cancer (APNLC), from the perspective of patients and healthcare professionals in a country lacking a regulatory oversight for advanced practice nursing (APN) roles. The new role appears to be well accepted by patients and physicians, yet barriers posed by nursing colleagues remain challenging.

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[*New professional roles and patient satisfaction: Evidence from a European survey along three clinical pathways*](#) Health Policy, October 2018

This paper reports the results of an empirical analysis exploring the impact of new professions (e.g. a physician associate) and new professional roles on patient experiences of and satisfaction with care. A subset of data from a patient survey conducted as part of the MUNROS programme of work was used. For patients with breast cancer, high levels of satisfaction are associated with the involvement of new professions/professional roles in the provision of conditions specific education and monitoring. For patients with heart disease, the involvement of new professions/professional roles is likely to have a negative impact on satisfaction. For patients with Type 2 diabetes results are ambivalent. Patients belonging to countries experiencing innovative models of healthcare delivery and with high levels of involvement of new professions/professional roles are generally more satisfied. In conclusion, the introduction of new professions does not affect patient satisfaction negatively, therefore introducing new health professional roles is a pursuable strategy from a patient satisfaction perspective, at least for breast cancer and type 2 diabetes.

[*Role of advanced nurse practitioners in the care pathway for children diagnosed with leukemia*](#) European Journal of Oncology Nursing, October 2018

Purpose The development of advanced nursing practices (ANP) can meet challenges presented by evolving needs of health care. We aimed at describing the approach taken to implement ANP in a pediatric oncology-hematology unit. Conclusion The impact of the implementation can be appreciated at different levels: i) the patient and his or her family, with improvement of communication and continuity of care; ii) the interdisciplinary team, with development of a dynamic and greater motivation of the health care providers; and iii) the profession, with a greater recognition of the competencies and conceptualization of the new role. An assessment of the process, the structure and the results should be carried out to validate the role of the advanced nurse practitioner throughout the long journey of a child with leukemia.

[*The Experiences of Specialist Nurses Working Within the Uro-oncology Multidisciplinary Team in the United Kingdom*](#) Clinical Nurse Specialist (CNS)

United Kingdom prostate cancer nursing care is provided by a variety of urology and uro-oncology nurses. The experience of working in multidisciplinary teams (MDT) was investigated in a national study. Despite expertise and experience, nurses had a

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variable, often negative, experience of the MDT. It is necessary to ensure that all participants can contribute and are heard and valued. More emphasis should be given to patients' nonmedical needs.

[Reconfiguring health workforce: a case-based comparative study explaining the increasingly diverse professional roles in Europe](#) BMC Health Services Research, November 2016

Over the past decade the healthcare workforce has diversified in several directions with formalised roles for health care assistants, specialised roles for nurses and technicians, advanced roles for physician associates and nurse practitioners and new professions for new services, such as case managers. Hence the composition of health care teams has become increasingly diverse. There are considerable differences in the number and kind of extended roles between both countries and care pathways. The main drivers for new roles reside in the technological development of medical treatment and the need for more generic competencies. Extended roles develop in two directions: 1) specialised roles and 2) generic roles.

[The impact of the introduction of a palliative Macmillan consultant radiographer at one UK cancer centre](#) The British Journal of Radiology, September 2016

OBJECTIVE The UK radiotherapy (RT) workforce needs novel strategies to manage increasing demand. The appointment of a palliative RT (PRT) consultant radiographer (CR) offers a potential solution to enhance patient pathways providing timely RT. This article examined the impact of one such appointment.
CONCLUSION A CR has the potential to impact on the patient pathway, enabling quicker times from DTT to treatment. Continued audit of the role is required to ensure that it complements SpR training.

[Role of care co-ordinators in cancer clinical nurse specialist teams](#) Cancer Nursing Practice, April 2016

Strategic interest in the skill mix of the healthcare workforce has acknowledged the increasingly important role of non-registered staff, with care for cancer patients provided by teams comprising clinical nurse specialists (CNSs) at bands 6 and 7 and care co-ordinators at bands 3 and 4. This article outlines the development and role of care co-ordinators in cancer CNS teams in Leeds Teaching Hospitals NHS Trust, using the example of a gynaecological oncology care co-ordinator as a case study. With the support of CNS colleagues, the Leeds care co-ordinators provide high-quality patient care through telephone and face-to-face contact

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and holistic needs assessments. Care co-ordinators act as named key workers for patients, developing good relationships and providing support at diagnosis, through treatment and beyond to survivorship. Patients and carers have welcomed the role and its development has enabled CNSs to focus their specialist skills on those patients requiring higher level interventions.

[*The specialist nursing workforce caring for men with prostate cancer in the UK*](#) International Journal of Urological Nursing, March 2016

A national survey of the specialist nursing workforce caring for men with prostate cancer was completed across the four countries of the UK during June and July 2014. In total 302 specialist nurses completed the survey and data from 285 was used in the analysis. This is the biggest whole population survey of this workforce in recent years. The most common job title was clinical nurse specialist (185) and the most common band was agenda for change band 7 (174). However in Scotland 50% of the respondents stated that they were paid on band 6. Over half the group (158) had worked in prostate cancer care for more than 10 years. Few (48) had come into specialist posts from a specific specialist nurse development role. There is wide geographic variation in the provision of specialist nursing for men with prostate cancer. This is reflected in available hours and caseload sizes. The respondents
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reported frozen and vacant posts across the UK. This equated to 58.3 full time equivalents. The work of specialist nurses caring for men with prostate cancer is clinically complex and appears to cover most key times in the cancer journey. However workload appears to be limiting the care that the nurses are able to provide with over half the respondents (163) saying that they left work undone for patients.

Lung Cancer Nurse Specialists

[*Are working practices of lung cancer nurse specialists associated with variation in peoples' receipt of anticancer therapy?*](#) Lung Cancer, September 2018

Treatment choices for people with lung cancer may be influenced by contact and engagement with lung cancer nurse specialists (LCNSs). We investigated how service factors, LCNS workload, and LCNS working practices may influence the receipt of anticancer treatment. LCNS assessment, workload, and working practices are associated with the likelihood of patients receiving anticancer therapy. Enabling and supporting LCNSs to undertake key case management interventions offers an opportunity to improve treatment uptake and reduce the apparent gap in receipt of surgery for those suitable.

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[Which patients are assessed by lung cancer nurse specialists? A national lung cancer audit study of over 128,000 patients across England](#) Lung Cancer, June 2016

Lung cancer nurse specialists (LCNS) are integral to the multidisciplinary clinical team, providing personalised physical and psycho-social interventions, and care management for people with lung cancer. The National Institute of Health and Care Excellence (NICE) recommend that all patients have access to a LCNS. We conducted a national study assessing whether there is variation in access to and timing of LCNS assessment. LCNS assessment varied by patient and Trust features, which may indicate unmet need for some patients. The current workforce needs to expand as well as retain experienced LCNSs.

New ways of working

[American Society of Clinical Oncology Road to Recovery Report: Learning From the COVID-19 Experience to Improve Clinical Research and Cancer Care](#)

Journal of Clinical Oncology, January 2021

This report presents the American Society of Clinical Oncology's (ASCO's) evaluation of the adaptations in care delivery, research operations, and regulatory oversight made in response to the coronavirus pandemic and presents recommendations for moving

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forward as the pandemic recedes. Its specific goals are: (1) ensure that clinical research is accessible, affordable, and equitable; (2) design more pragmatic and efficient clinical trials; (3) minimize administrative and regulatory burdens on research sites; (4) recruit, retain, and support a well-trained clinical research workforce; and (5) promote appropriate oversight and review of clinical trial conduct and results. Similarly, ASCO also organized its recommendations regarding cancer care delivery around five goals: (1) promote and protect equitable access to high-quality cancer care; (2) support safe delivery of high-quality cancer care; (3) advance policies to ensure oncology providers have sufficient resources to provide high-quality patient care; (4) recognize and address threats to clinician, provider, and patient well-being; and (5) improve patient access to high-quality cancer care via telemedicine.

[Cancer Nursing's Potential to Reduce the Growing Burden of Cancer Across the World](#) Oncology Nursing Forum, November 2020

The incidence of cancer globally is expected to exceed 27 million new cancer cases per year by 2040 in part due to the aging of the population and greater susceptibility to aging-related diseases such as cancer. This estimated increase in cancer incidence will occur in all countries, but the predicted increase will be proportionately greatest in low and medium countries.

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[Oncology workforce skills and competencies required for molecular medicine](#) European Journal of Hospital Pharmacy. Science and Practice, September 2020
Increasing the wider workforce knowledge and understanding of molecular medicine is an enormous task and requires significant investment. This editorial is aimed at raising awareness of the workforce configurations and new roles required to deliver molecular alteration-specific treatments. Individualised patient care has never been so important, and the cancer services' workforce must develop the capacity and expertise to keep pace with advances in technology in order to improve outcomes and support for patients with cancer.

[Developing and Sustaining an Effective and Resilient Oncology Careforce: Opportunities for Action](#) Journal of the National Cancer Institute, April 2020
Considering the widening gap between the number of patients needing cancer care and the limited capacity of the current workforce to meet these demands, a crisis is looming, which will hinder access to timely, high-quality care if left unchecked. Because recruiting and training more cancer clinicians is unlikely to solve this problem alone, we posit that the most critical and feasible solution is to improve the efficiency with which cancer care is delivered, leveraging the strategies described above. Organizations should embark on practice-level changes to improve the effectiveness and

resilience of their workforces, but system-level changes are also urgently needed and will require national will and coordinated efforts from regulatory agencies, payers, and practitioners.

[Task shifting between physicians and nurses in acute care hospitals: cross-sectional study in nine countries](#)
Human Resources for Health, May 2018
BACKGROUND Countries vary in the extent to which reforms have been implemented expanding nurses' Scopes-of-Practice (SoP). There is limited cross-country research if and how reforms affect clinical practice, particularly in hospitals. This study analyses health professionals' perceptions of role change and of task shifting between the medical and nursing professions in nine European countries.
CONCLUSIONS Higher levels of changes to staff roles and task shifting were reported in the Netherlands, England and Scotland, suggesting that professional boundaries have shifted, for instance on chemotherapy or prescribing medicines. For most tasks, however, a partial instead of full task shifting is practice.

[Development and testing of the cancer multidisciplinary team meeting observational tool \(MDT-MOT\)](#)
International Journal of Quality in Health Care, 2016
OBJECTIVE: To develop a tool for independent observational assessment of cancer multidisciplinary team meetings (MDMs), and test criterion validity, inter-

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rater reliability/agreement and describe performance. CONCLUSIONS: MDT-MOT demonstrated good criterion validity. Agreement between clinical and non-clinical observers (within one point on the scale) was high but this was inconsistent with reliability coefficients and warrants further investigation. If further validated MDT-MOT might provide a useful mechanism for the routine assessment of MDMs by the local workforce to drive improvements in MDT performance.

Surgery workforce

[Forecasting the impact of stereotactic ablative radiotherapy for early-stage lung cancer on the thoracic surgery workforce](#) European Journal of Cardio-thoracic surgery, June 2016

To predict variation in thoracic surgery workforce requirements with the introduction of stereotactic ablative radiotherapy (SABR) for the treatment of early-stage non-small-cell lung cancer (NSCLC). With the implementation of SABR for treatment of early NSCLC, there would be a decrease in operative volume. The impact would depend on the stage of NSCLC for which SABR is recommended and on compliance. A national strategy for thoracic surgery workforce planning is necessary, given the complex interaction of CT screening and the treatment of medically operable early NSCLC with SABR.

[The impact of the aging population and incidence of cancer on future projections of general surgical workforce needs](#) Surgery, March 2018

Assessments of the future general surgery workforce continue to project substantial shortages of general surgeons. The general surgery workforce is targeted currently to maintain a surgeon/population ratio of 6.5-7.5/100,000. The analysis supports the hypothesis that an increasing incidence of cancer in the future will exceed the potential capacity of the general surgeon workforce. Regionalization of cancer care may be one solution to projected access issues.

Workforce Demographics

[Women in oncology pharmacy leadership: A white paper](#) Journal of Oncology Pharmacy Practice, January 2020

The purpose of this white paper is to (1) summarize key issues that were identified through a membership survey; (2) review ongoing efforts to address the needs of female oncology pharmacists in leadership development; (3) serve as a call to action for individuals and professional organizations to assist with and disseminate these efforts and highlight available resources, and (4) to provide practical steps to meet the needs of individuals, training programs, and institutions/employers.

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[Addressing the Gap: Highlighting the need for growing the specialist cancer nursing workforce](#) Macmillan Cancer Support, September 2020

Macmillan's most recent workforce census demonstrated that there are worrying vacancy rates across specialist cancer nurse roles in England, with significant geographic variation. Subsequent patient and workforce reported data still demonstrates unmet need amongst people living with cancer. The causes and impact of the crisis in the NHS workforce are multifaceted and go beyond the scope of this paper. However, the specialist cancer nurse vacancy rates and the solutions to address them must be understood within the context of a wider crisis in the general nursing population and the increasing pressures on the NHS caused by rising patient need - with the Covid-19 pandemic throwing into sharp focus the fragility of our workforce.

[American Society of Clinical Oncology Strategic Plan for Increasing Racial and Ethnic Diversity in the Oncology Workforce](#) Journal of Clinical Oncology, August 2017

In December 2016, the American Society of Clinical Oncology (ASCO) Board of Directors approved the ASCO Strategic Plan to Increase Racial and Ethnic Diversity in the Oncology Workforce. Developed through a multistakeholder effort led by the ASCO Health Disparities Committee, the purpose of the plan is
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to guide the formal efforts of ASCO in this area over the next three years (2017 to 2020). There are three primary goals: (1) to establish a longitudinal pathway for increasing workforce diversity, (2) to enhance ASCO leadership diversity, and (3) to integrate a focus on diversity across ASCO programs and policies. Improving quality cancer care in the United States requires the recruitment of oncology professionals from diverse backgrounds.

[Cancer, biomedical science leaders strive to improve workforce diversity](#) Cancer Scope, March 2016

National initiatives target recruiting, retaining researchers from diverse backgrounds.

[A scoping review of the nurse practitioner workforce in oncology](#) Cancer Medicine, August 2016

The quality of cancer care may be compromised in the near future because of work force issues. Several factors will impact the oncology health provider work force: an aging population, an increase in the number of cancer survivors, and expansion of health care coverage for the previously uninsured. Results demonstrated that NPs are utilized in both inpatient and outpatient settings, across all malignancy types and in a variety of roles. Academic institutions were strongly represented in all relevant studies, a finding that may reflect the Accreditation Council for Graduate Medical

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Education (ACGME) duty work hour limitations. There was no pattern associated with state scope of practice and NP representation in this scoping review. Many of the studies reviewed relied on subjective information, or represented a very small number of NPs. There is an obvious need for an objective analysis of the amount of care provided by oncology NPs.

Supply

[Oncology nursing workforce: challenges, solutions, and future strategies](#) The Lancet Oncology, December 2020
Innovative recruitment strategies, onboarding and continuing education programmes, occupational safety measures, and burnout prevention interventions are documented solutions. The long-term effect of COVID-19 on oncology care worldwide is unknown, but immediate therapy interruptions, workforce consequences, and threats to standard oncology nursing practice are addressed here. Retention of experienced oncology nurses is crucial for future cancer control in all countries and must be addressed, particularly in resource-constrained countries with few oncology nursing staff and continuing out-migration of nurses to resource-rich countries.

[Strengthening the global nursing workforce for childhood cancer](#) The Lancet Oncology, November 2020

The Commission calls for the alignment of national and global efforts to address inequity in paediatric cancer outcomes with the targeted expansion of access to safe and effective care in low-income and middle-income countries.

[Radiographer reporting: A literature review to support cancer workforce planning in England](#) Radiography, May 2019

Radiographer reporting is well established in the United Kingdom. Scope of practice varies individually and geographically. Deployment of appropriately trained reporting radiographers is helping the NHS maintain high quality clinical imaging service provision and deliver a cost-effective increase in diagnostic capacity. Working within multiprofessional clinical imaging teams, within a defined scope of practice and with access to medical input when required, reporting radiographers augment capacity in diagnostic pathways and release radiologist time for other complex clinical imaging responsibilities.

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[Management of Medical Oncology Services in Canada: Redefined Workload with a Novel Supply-and-Demand Workforce Projection Model](#) Journal of Oncology Practice, July 2018

We developed a workforce-planning model to predict Canadian medical oncologist (MO) supply and clinical demand during the next 10 years. We have developed a forward calculation MO workforce model that predicts a growing Canadian MO workforce and redefines MO workload dynamics. MO providers will increasingly support more follow-up care with the initiation of multiple lines of systemic therapy relative to the medical management of patients at the time of initial cancer diagnosis. Workload metrics, including follow-up and new therapy initiation rates, must be measured to appropriately to meet increasingly complex and growing care demands.

[The characteristics of oncology social work in Australia: Implications for workforce planning in integrated cancer care](#) Asia-Pacific Journal of Clinical Oncology, December 2016

AIMS To describe the demographics, professional characteristics, self-reported professional development needs and research involvement of oncology social workers in Australia and to describe perceived barriers to provision of quality psychosocial care. In this first Australian study of the social work oncology workforce,

the results demonstrated active, well-qualified and experienced social workers providing frontline services to people with cancer and their caregivers in geographically diverse locations across Australia. Inadequate resources and a lack of integrated psychosocial care were identified as barriers to comprehensive cancer care. The need for Aboriginal and Torres Strait Islander social workers was identified as an urgent workforce priority.

Staff and patient perspectives and perceptions

[Perceptions of the cancer care left undone in primary and community services: A mixed methods evaluation](#) Health & Social Care in the Community, May 2020

This service evaluation aimed to elucidate some of the views of the workforce in this sector of what work in cancer care is left undone, and what they would like to be able to offer more of. An exploratory sequential design was taken including a questionnaire and interviews asking primary and community care staff in London about their workload in cancer care. Respondents identified psychological care for people with cancer (PWC), and bereavement care for families and carers of PWC as the most common areas that were left undone. They would like to do more proactive work, in place of the current reactive 'firefighting' they are doing. For example, signposting available services to PWC and access to nutritional support.

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[Voices from the frontline: Challenges facing cancer clinical nurse specialists right now](#) Macmillan Cancer Support, September 2019

The NHS nursing workforce is at breaking point, with vacancies reaching 40,000 and near intolerable pressure being placed on many professionals. The causes of this crisis are multifaceted, and so too must the response be. Whilst there is no single silver bullet which can reverse current trends and much more needs to be done to grow the workforce, we also need to do more to support and retain existing nursing staff. We know too that lack of development and learning support is a commonly cited reason for nurses leaving the profession. Ensuring that nurses are up to date and able to deliver the best possible care is also fundamental to patient safety and quality of life. For these reasons, we believe prioritising CPD is critical in creating a fit-for-purpose NHS workforce.

[Nurses' Perspectives on the Personal and Professional Impact of Providing Nurse-Led Primary Palliative Care in Outpatient Oncology Settings](#) International Journal of Palliative Nursing, January 2019

Nurses reported a sense of personal and professional fulfilment from providing primary PC, while noting the risk of increased emotional attachment to patients. Participation improved nursing communication skills. A supportive workplace helped to minimise stress related

to incorporating primary PC into busy treatment schedules. Conclusion: Providing primary PC challenges the task-oriented paradigm of nursing practice and will potentially alter the professional roles and workloads of infusion room nurses.

[A mixed methods analysis of experiences and expectations among early-career medical oncologists in Australia](#) Asia-Pacific Journal of Clinical Oncology, January 2018

A viable and sustainable medical oncology profession is integral for meeting the increasing demand for quality cancer care. The aim of this study was to explore the workforce-related experiences, perceptions and career expectations of early-career medical oncologists in Australia. Perceived diminished employment opportunities in the medical oncology profession, and shifting expectations to be "more qualified," have increased uncertainty among junior medical oncologists in terms of their future career prospects. Structural factors relating to adequate funding of medical oncology positions may facilitate or inhibit progressive change in the workforce and its sustainability. Workforce planning and strategies informed by findings from this study will be necessary in ensuring that both the needs of cancer patients and of medical oncologists are met.

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[*A national survey exploring UK trainees' perceptions, core training experience, and decisions to pursue advanced training in breast radiology*](#) Clinical Radiology, November 2017

To investigate UK radiology trainees' perceptions of breast radiology and the factors that influenced their decision whether or not to choose breast radiology as an area of special interest. Breast radiology faces a significant workforce shortfall that is predicted to worsen in the coming years. There has never been a greater need to recruit specialty trainees into this field, and action is urgently needed to help ensure the sustainability of breast services and drive further improvements to patient care. The findings from this survey should be regarded as a challenge to all breast radiologists to engage with trainees from an early stage in their training and to enthuse them with the many positive aspects of a career in breast radiology.

[*Patient Perspectives on Nurse Practitioner Care in Oncology in Canada*](#) Journal of Nursing Scholarship, September 2017

Athens log in required

The purpose of this study was to add to what is known about patient satisfaction with nurse practitioner (NP) care, from the perspective of breast cancer patients who were followed by an NP. Conclusions and Clinical Relevance Today's healthcare system is characterized

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by accessibility issues, unmet patient need, workforce issues, and funding pressures. This research supports and enriches what is known about the benefits and usefulness of NP-provided care from the viewpoint of those receiving the care. The findings offer guidance to NPs in the clinical setting regarding patient needs and optimal care strategies.

Training, education and upskilling

[*Nurturing a Research-active Clinical Oncology Workforce: A Trainee Perspective*](#) Clinical Oncology, January 2021

In recent years the number of clinical oncology consultants who hold research posts has fallen. There is a need to develop a training environment in which all clinical oncologists are enthused and enabled to participate in research. This will depend not just on providing every trainee with exposure to research or with the space and time to undertake it; but on doing so from the earliest stages of training within an environment rich in incentives, support, and mentorship.

[*Acute oncology: Increasing engagement and visibility in acute care settings*](#) Royal College of Physicians, October 2020

AO is an evolving area of specialist practice that has developed in different ways and at different paces in

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different regions over the past decade. The current curriculum revisions in both clinical and medical oncology place AO competence as a high-level outcome. Development of AOS requires a coherent approach to defining the purpose and breadth of the services, formal training of the workforce to lead and deliver them and investment to ensure comprehensive UK coverage.

[The multidisciplinary pediatric psycho-oncology workforce: A national report on supervision for staff and training opportunities](#) Psycho-oncology, December 2018

A properly trained and supported psychosocial workforce is essential to providing evidence-based care consistent with the Psychosocial Standards. Psychosocial providers are appropriately licensed. However, supervision opportunities are variable and may be inadequate for the intensity of the work. It is important to address the limited opportunities for trainees in pediatric cancer programs, which may influence the pipeline for ongoing and future work in this area.

[Skill sharing and delegation practice in two Queensland regional allied health cancer care services: a comparison of tasks](#) Australian Health Review, November 2018

Delegation and skill sharing are emerging service strategies for allied health (AH) professionals working in Queensland regional cancer care services. The aim of the present study was to describe the consistency between two services for the types and frequency of tasks provided and the agreement between teams in the decision to delegate or skill share clinical tasks, thereby determining the potential applicability to other services. Conclusions: Strong consistency was apparent for the clinical tasks undertaken by the two cancer care AH teams, with moderate agreement for the frequency of tasks performed. The proportion of tasks considered appropriate for skill sharing and/or delegation was similar, although variation at the task level was apparent. Further research is warranted to examine the range of factors that affect the decision to skill share or delegate.

[Oncology Nurse Practitioner Role](#) Clinical Journal of Oncology Nursing, October 2018

As the need for cancer care in the United States continues to grow with advances in treatment options, aging of the population, changing workforce demographics, and new cancer care delivery models,

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ONPs will be integral to the delivery of high-quality care. Efforts to promote their practice at the fullest extent of the license and across various cancer care settings are imperative. Resources should be devoted to ONP education, onboarding, and retention to ensure that they not only are able to effectively integrate themselves into the healthcare system, but also establish themselves as leaders of the interprofessional team.

[*The Hidden Costs of Medical Education and the Impact on Oncology Workforce Diversity*](#) JAMA Oncology, March 2018

The staggering burden of US physician debt, combined with the demands of our proliferating cancer patient census, documentation requirements, and regulatory hurdles, are leading to staggering rates of depersonalization and emotional exhaustion among oncologists. These stressors, magnified by a broken health care system that has become a political football, can leave many oncologists lamenting the gradual transformation of a noble career into one fraught with uncertainty, bureaucratic checkboxes, and diminished checking accounts.

[*Physician Training in Cancer Prevention and Control: A Population Health Imperative*](#) American Journal of Preventative Medicine, March 2018

Cancer is the second leading cause of morbidity and mortality in the U.S. Although reducing the number of new cancer cases is a national health goal, the continuing growth of the older adult population ensures that the burden of cancer will increase. Despite documentation of the shortage of oncologists to meet the growing need, relatively limited attention has been focused on increasing the physician workforce trained in the prevention and control of cancer.

[*What Competencies Are Required for Oncology Nurse Generalists?*](#) ONS Voice, January 2018

The article offers suggestions to oncology nurse to ensure high-quality care. Topics discussed include training programs that focus on increasing and building competency can strengthen and multiply the workforce of nurses; need of performance goals for themselves and engage in learning opportunities to achieve those goals; and oncology nurses integrate patient-centered care across cancer trajectory.

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[Building A High Quality Oncology Nursing Workforce Through Lifelong Learning: The De Souza Model](#)

International Journal of Nursing Education Scholarship, January 2018

Cancer is one of the leading causes of death in the world. Along with increased new cases, cancer care has become increasingly complex due to advances in diagnostics and treatments, greater survival, and new models of palliative care. Nurses are a critical resource for cancer patients and their families. Their roles and responsibilities are expanding across the cancer care continuum, calling for specialized training and support. Formal education prepares nurses for entry level of practice, however, it does not provide the specialized competencies required for quality care of cancer patients. There is urgent need to align the educational system to the demands of the health care system, ease transition from formal academic systems to care settings, and to instil a philosophy of lifelong learning. We describe a model of education developed by de Souza Institute in Canada, based on the Novice to Expert specialty training framework, and its success in offering structured oncology continuing education training to nurses, from undergraduate levels to continued career development in the clinical setting. This model may have global relevance, given the challenge in managing the demand for high quality care in all disease areas and in keeping pace with the emerging advances in technologies.

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[What is important for student nurses to know about cancer treatment and care: a qualitative study of student nurses' and stakeholder perspectives](#) Journal of Clinical Nursing, July 2017

AIMS AND OBJECTIVES: To explore the views of student nurses' and stakeholders of what is important for student nurses to know about cancer treatment and care. CONCLUSIONS: Collaborative working with people affected by cancer and educationalists has allowed the patient and carer experience to be placed at the centre of the undergraduate cancer education.

[Social networks and expertise development for Australian breast radiologists](#) BMC Health Services Research, February 2017

In this study, we explore the nexus between social networks and expertise development of Australian breast radiologists. Background literature has shown that a lack of appropriate social networks and interaction among certain professional group(s) may be an obstacle for knowledge acquisition, information flow and expertise sharing. To date there have not been any systematic studies investigating how social networks and expertise development are interconnected and whether this leads to improved performance for breast radiologists. We argue that radiologists' and, in particular, breast radiologists' work performance, needs to be explored not only through individual numerical

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characteristics but also by analysing the social context and peer support networks in which they operate and we identify multidisciplinary care as a core entity of social learning.

[Work engagement in cancer care: The power of co-worker and supervisor support](#) European Journal of Oncology Nursing, April 2016

Co-worker and supervisor support can provide knowledge, advice and expertise which may improve motivation, confidence and skills. This exploratory study aimed to examine the association of co-worker and supervisor support, and other socio-demographic and practice variables with work engagement for cancer workers. The study surveyed 573 cancer workers in Queensland (response rate 56%). Conclusions This study emphasises that health care managers need to promote co-worker and supervisor support in order to optimise work engagement with special attention to those who are not directly involved in patient care.

Global

[Global Survey of Clinical Oncology Workforce](#) Journal of Global Oncology, September 2018

A lack of well-trained clinical oncologists can result in significant cancer health disparities. The magnitude of this problem around the world is poorly described in the

literature. A comprehensive global survey of the clinical oncology workforce was conducted. Eight countries had no clinical oncologist available to provide care for patients with cancer. In 22 countries (24%), a clinical oncologist would provide care for 500 patients with cancer. In 27 countries (29%), a clinical oncologist would provide care for > 1,000 incident cancers, of which 25 were in Africa, two were in Asia, and none were in Europe or the Americas. The economic and social development status of a country correlates closely with the burden of cancer and the shortage of human resources. Addressing the shortage of clinical oncologists in regions with a critical need will help these countries meet the sustainable development goals for noncommunicable diseases by 2030.

[Increasing global access to cancer care: models of care with non-oncologists as primary providers](#) The Lancet Oncology, August 2017

The rapidly increasing incidence of cancer in low-income and middle-income countries is compounded by a profound shortage of both oncologists and facilities with the capacity for cancer care in these settings. In a model where only oncologists treat cancer, patients-many with curable diseases-will die waiting for oncologists to be trained. [...]it is imperative to develop innovative models of care that address the immediate needs of patients with cancer. Formal oncology training

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programmes and opportunities are scarce in low-income and middle-income countries.

Barriers

[Barriers and facilitators to community-based psycho-oncology services: A qualitative study of health professionals' attitudes to the feasibility and acceptability of a shared care model](#) Psycho-oncology, September 2019

Psychological therapies combined with medication are effective treatments for depression and anxiety in patients with cancer. However, the psycho-oncology workforce is insufficient to meet patient need and is hard to access outside of the major cities. To bridge this gap, innovative models of care are required. This in-depth exploration of Australian health professionals' perceptions of the feasibility and acceptability of a community-based model of psycho-oncology care revealed that most clinicians were willing to adopt the proposed changes into practice. An RCT of a shared care intervention for depressed patients with cancer is needed.

[Barriers to delivering advanced cancer nursing: A workload analysis of specialist nurse practice linked to the English National Lung Cancer Audit](#) European Journal of Oncology Nursing, October 2018
Health services across the world utilise advanced practice in cancer care. In the UK, lung cancer nurse
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specialists (LCNS) are recognised as key components of quality care in national guidelines, yet access to LCNS contact is unequal and some responsibilities are reportedly left undone. We assess whether any variation in working practices of LCNS is attributable to factors of the lung cancer service at the hospital trust. Conclusion Working practices of LCNS vary according to service factors, most frequently associated with trust anti-cancer treatment facilities. High workload pressures and limited ability to provide key interventions should be addressed across all services to ensure patients have access to recommended standards of care.

Impact

[Nurse Practitioners and Physician Assistants: An Underestimated Workforce for Older Adults with Cancer](#) Journal of the American Geriatrics Society, July 2019
Previous research underestimated the number of PAs and NPs providing cancer care to older adults, especially to lower-income older adults, those in rural settings, and those in the South. Any solution to the rising demands for cancer care will need to maximize every healthcare provider's contribution and support his/her practice at the full scope of his/her license. Findings from this study offer a starting point at which future workforce surveys can be compared. Solutions that address the shortage of cancer care providers for older adults need to be based on a realistic

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understanding of who is providing that care. NPs and PAs can help improve care access.

[How Nurse Practitioners Are Enhancing the Oncology Workforce](#) ONS Voice, January 2018

The article offers information on American Society of Clinical Oncology Practice Census survey that advanced practice providers play pivotal clinical roles like ordering and administering chemotherapy to managing pain and other adverse effects or symptoms, and provide primary care to patients with cancer and survivors. Topics discussed include access to high-quality oncology care; need to meet the unique care needs of patients with cancer; and enhance the oncology workforce.

[Palliative care teams' cost-saving effect is larger for cancer patients with higher numbers of comorbidities](#)

Health Affairs, 2016

Patients with multiple serious conditions account for a high proportion of health care spending. Such spending is projected to continue to grow substantially as a result of increased insurance eligibility, the ever-rising cost of care, the continued use of nonbeneficial high-intensity treatments at the end of life, and demographic changes. We evaluated the impact of palliative care consultation on hospital costs for adults with advanced cancer, excluding those with dementia. We found that compared to usual care, the receipt of a palliative care

consultation within two days of admission was associated with 22 per cent lower costs for patients with a comorbidity score of two to three and with 32 per cent lower costs for those with a score of 4 or higher. Earlier consultation was also found to be systematically associated with a larger cost-saving effect for all subsamples defined by multimorbidity. Given ongoing workforce shortages, targeting early specialist palliative care to hospitalized patients with advanced cancer and higher numbers of serious concurrent conditions could improve care while complementing strategies to curb the growth of health spending.

Competency Frameworks

[The Macmillan Allied Health Professions Competence Framework for those working with people affected by cancer](#) Macmillan Cancer Support, December 2020

The primary intention of the MAHPCF is to support Allied Health Professional managers, teams and individuals in both specialist and general health and social care settings by identifying appropriate competences in cancer care. The information contained within the framework should assist individuals and organisations to use competence to support recruitment, workforce planning and development, career progression and role design, and to help them consider both individual and team needs to ensure that

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people living with cancer are being effectively supported.

[The Macmillan Competency Framework for Nurses \(MCFN\) supporting people living with and affected by cancer](#)

Macmillan Cancer Support, November 2020

This competency framework is for nurses who support people living with or affected by cancer. It can be used in any adult care setting and alongside other established frameworks to improve care for patients.

The competency framework focuses on:

- professional skills
- knowledge
- behavioural skills
- experience and qualifications.

[Career and Education Framework for Cancer Nursing](#)

Royal College of Nursing and UK Oncology Nursing Society (UKONS), February 2017

Guidance for: pre-registration nursing students, support workers in health and social care, registered nurses providing general or specialist cancer care.

[End of Life Care Core Skills Education and Training Framework](#)

HEE and Skills for Health and Skills for Care, February 2017

The framework builds on the Government's National End of Life Care Strategy and response to the Review of End of Life Care, which stated that everyone has

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access to 'high quality, personalised end of life care built around their needs'. This person-centred approach is key to current thinking and policy around end of life care: considering each patient's individual needs, preferences and available support networks and involving them and their families and carers in decisions around their care.

[Competencies: Caring for Teenagers and Young Adults with Cancer: a competence career framework for nursing](#)

Teenage Cancer Trust and Royal College of Nursing, 2014

This is the first competence and career framework for nurses who care for teenagers and young adults (aged 13-24 years inclusive) with cancer across the broad spectrum of healthcare settings and describes the professional standards expected of them.

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