CHESHIRE AND MERSEYSIDE PRIMARY CARE CANCER EDUCATION STRATEGY

2020-2025

Produced by the Macmillan Primary Care Cancer Education Project Team at The Clatterbridge Cancer Centre NHS Foundation Trust (CCC), Clinical Education Department.

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<u>**Figures and Tables**</u>

Acknowledgements

Project Team

Lucie Conway - Macmillan Project Support Worker, Clinical Education Department, CCC

Dr. Debbie Harvey - Macmillan GP & Clinical Lead, Clinical Education Department, CCC

Dr. Joan Olajide - Macmillan Project Manager, Clinical Education Department, CCC

Kate Greaves – Associate Director of Clinical Education, CCC and Chair of Project Steering Group

Debbie Wyatt – Head of Clinical Education, CCC and Deputy Chair of Project Steering Group

Sheila Lloyd – Director of Nursing & Quality, CCC and Project Sponsor

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1. Executive summary

The recently published **NHS long-term plan (2019)** provided a framework for local systems to develop plans directed at optimal patients' support, adequate and timely joined-up care. For cancer care, the plan indicated that the NHS would maximise all efforts at improving cancer survival through earlier diagnosis. It sets an ambition to increase the proportion of cancers diagnosed at stages 1 and 2 from half to three-quarters by 2028. The **NHS five-year forward view document (2014)** also highlighted that anticipated cancer improvement would be determined by better prevention and the level of faster diagnosis and standardised care provided to patients in readily accessible GP and integrated services (e.g. primary, secondary, tertiary, community services, social care and support). The provision of Macmillan Cancer Support recovery package was also recommended, as it would help to ensure that coordinated care is provided resulting in improved patient experience and reported outcomes. **Macmillan Cancer Support** provides specialist health care aimed at helping people with cancer live fully through the provision of physical, financial and emotional support. It also develops tools, opportunities, information, research and education to support health and social care professionals in their care of people affected by cancer. It achieves all these by working in partnership with NHS Trusts.

The Clatterbridge Cancer Centre NHS Foundation Trust is one of the country's largest specialist NHS Trusts, providing non -surgical cancer care and treatment to a population of 2.4 million across Cheshire and Merseyside (C&M) and to the Isle of Man. The Trust now has three specialist centres at Wirral, Aintree and the newly opened state - of - the art hospital in Liverpool, which is Liverpool's first cancer hospital and part of the Trust's £162m investment in expanding and transforming cancer services in C&M where cancer is more prevalent than other parts of the country. The new hospital and the existing cancer centres in Wirral and Aintree will strive to deliver equitable access to high quality care and research for patients, maintaining the Trust's mission of:

"Improving health and wellbeing through compassionate, safe and effective cancer care".

With **the Cheshire and Merseyside Cancer Alliance (CMCA)** based at The Clatterbridge Cancer Centre NHS Foundation Trust, the alliance brings together key organisations and partners in C&M to coordinate cancer care and improve patients' outcomes locally. The long-term ambitions of the CMCA are to:

- ***To take every opportunity to prevent cancer and ensure outstanding cancer care is provided across Cheshire and Merseyside;***
- ***To help more people to survive cancer and support them to live well, with and beyond cancer;***
- ***To always focus on quality, patient experience and sustainability in equal measure.***

One of the action plans of the CMCA in achieving the aspirations set out by ***NHS long-term plans and the five-year forward view*** recommendations is the development of training and educational programmes for healthcare workforce across C&M. The health care workforce across C&M is expected to:

1. Deliver high quality, equitable and integrated cancer care;
2. Ensure that the focus is on quality, patient experience and sustainability in equal measures;
3. Drive improvements in cancer prevention, achieve earlier diagnosis, ensure access to comprehensive treatments in a research active climate and accelerate the adoption of new technologies and innovations;
4. Build on the strengths of existing single service model, promoting change, which is necessary to deliver system sustainability, and working with partners across the STP.

And the aspirations and performance metrics linked to these objectives are:

- An increase in 1 year cancer survival to more than **75% by 2028;**
- Achievement of the **new faster diagnosis standard by 2020**, to support 62 day compliance;
- Reduction in adult smoking rates to **13%;**
- **Delivery of the cancer recovery package to all**, including supported self-management;
- Improved access to clinical trials;
- Delivery of **a greater system sustainability** focusing on networked capacity solutions for radiology, endoscopy and pathology (and IM&T); supporting necessary system change and implementing best practice management pathway.

This Cheshire & Merseyside (C&M) Primary Care cancer education strategy sets out how cancer education will support the primary care workforce across C&M in providing high standards of care to patients, right from prevention, to earlier cancer detection, diagnosis and referral, safety netting and in supporting patients living with and beyond cancer, in achieving the aspirations highlighted above.

In developing this primary care cancer education strategy for the Primary Care workforce across C&M, a scoping exercise was undertaken by the Macmillan Primary Care Cancer Education Project Team at The Clatterbridge Cancer Centre NHS Foundation Trust, Clinical Education Department and funded by Macmillan Cancer Support. The exercise explored the feasibility of improving care for patients with suspected and diagnosed cancer through the development of a centralised programme of cancer education that equips the primary care workforce (clinical and non-clinical) with high quality, accessible and sustainable educational and professional development programmes in C&M.

The key deliverables for Cheshire and Merseyside primary care cancer education strategy development

1.	**To identify and articulate cancer education needs and expectations of General Practitioners (GPs), GP Cancer Leads, Advanced Nurse Practitioners (ANPs), Practice Nurses (PNs), Health Care Assistants (HCAs), Non-Clinical staff and education providers**
2.	**To explore current approaches to cancer education delivery and access in primary care settings across C&M**
3.	**To highlight gaps in the delivery and access to cancer education in primary care across C&M**
4.	**To identify key partners and stakeholders that could support the implementation of primary care cancer education portal in C&M**
5.	**To develop an evidence-based strategy for the delivery of cancer education to primary care professionals in C&M**
6.	**To highlight maintenance and sustainability plan for the strategy developed**
7.	**To develop an evaluation plan for assessment of effectiveness of the proposed cancer education portal/ programme for the primary care workforce across C&M**

The evidence gathering exercise comprised a series of surveys with C&M primary care staff (i.e. GPs, ANPs, Registrars, Locums, PNs, HCAs and Administrative & Non-Clinical staff); stakeholder engagement with key professionals involved in organising and planning primary care education and cancer patients' experience. The main findings revealed the need for better coordination, planning and approach to the delivery of cancer education for the primary care workforce across C&M. Based on the findings, and consultations with steering group members, the following recommendations are presented:

1. **Creation of a central system for the planning and delivery of a well-structured cancer education programme**
2. **Commitment to a long term plan that enables exploration of innovative approaches to cancer education towards maximised clinical performance**
3. **Coordination of a sustainable scheme with oversight and management structures in place**
4. **Collaboration and engagement with key partners and organisations**

This strategy report is structured into chapters 1 to 8, with the executive summary in chapter 1 while chapter 2 contains the rationale for cancer education for primary care professionals, national drivers and ambitions, C&M cancer prevalence and cancer screening metrics. Chapter 3 details the strategy development process while in chapter 4, the findings from the surveys and interviews conducted. In chapter 5 is the discussion of the findings while the recommendations are presented in chapter 6 and an outline of action plans in chapter 7 with conclusions in chapter 8.

2. Purpose and Priorities

2.1 Background

Lifetime risk analysis by Cancer Research UK (CRUK) has revealed that 1 in 2[1] people will be diagnosed with cancer in a lifetime. Although general improvement in cancer survival has been recorded, with half of those with cancer now living for at least 10 years, the 1-year survival rate in people aged 75 and above England is lower than European average. Moreover, with an increase in ageing population, and improved survival, there are a lot more people living with cancer.

Cancer diagnosis and subsequent treatment can be devastating as they affect the physical, emotional and mental wellbeing, social and financial lives of the person diagnosed. Their families and friends also need to establish care and support that is shaped around the individual, taking into account all the needs of the patient both practically and emotionally. Whilst cancer impacts on an individual significantly, it also affects the national economy as a whole. At the individual level, an estimate from a Macmillan Cancer Support report has shown that most (83%) cancer patients incur an average **cost of £570 per month** because of their illness[2].

Oxford University estimate the cost of all cancers to the economy as £15.8 billion a year due to premature deaths and time taken off work. For specific cancers, the Oxford study highlighted the cost of lung cancer at £2.4bn each year is far higher than that for any other cancer mainly because of potential wage losses due to premature deaths from people in employment – about 60 per cent of the total economic costs – and high health care costs[3].

An estimated 4 in 10 cancer cases are preventable majorly through lifestyle modification[4]. The main cancer risk factors include tobacco, weight, diet, alcohol consumption, UV exposure and lack of sufficient physical activity. In addition, poor social and environmental factors are important risk factors for cancers and across C&M, there is a high proportion of wards and neighbourhoods with high levels of socio-economic deprivation. Socio-economic factors impact on cancer screening uptake (e.g. breast cancer screening uptake) such that women living in more deprived areas tend to have a record of lower uptake of screening. Screening and early cancer detection result in a better chance of successful treatment, this implies that awareness of early diagnosis is vital for cancer survival.

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[1] https://www.cancerresearchuk.org/health-professional/cancer-statistics/risk/lifetime-risk#heading-Zero

[2] https://www.macmillan.org.uk/_images/Cancers-Hidden-Price-Tag-report-England_tcm9-270862.pdf

[3] https://www.ox.ac.uk/news/2012-11-07-cancer-costs-uk-economy-%C2%A3158bn-year

[4] https://scienceblog.cancerresearchuk.org/2018/03/23/new-calculations-confirm-lifestyle-changes-could-prevent-4-in-10-cancer-cases/

Diagnosing cancer in its later stages could account for about 6000 excess deaths a year in the UK. In the study by Tudor Car et al., 2016, apart from late presentation by patients, some of the other issues linked to delayed cancer diagnosis identified in their study were mainly categorised as system level issues and organisation of care (i.e. lack of continuity of care, short General Practitioners (GPs) consultations leading to inappropriate history taking and examination, delays in ordering and processing referrals and poor access to diagnostic testing) [5]. Overall, whilst the reasons for delayed cancer diagnosis are quite complex, long waiting times for tests across GP surgeries and hospitals were reported by a CRUK press release to be responsible for a quarter of all avoidable delays[6].

2.2 National Drivers

Varieties of clinical and non-clinical staff provide cancer care at all levels working across different multi-professional/disciplinary teams. Patient experience surveys have revealed a wide variation in the levels and standards of support received in terms of early detection, referral and subsequent support offered during and post-diagnosis of cancer. Some of the factors identified as important by patients for a 'good patient experience' were high quality communication with informed staff, meaningful involvement in treatment and effective co-ordination of care between different care settings[7].

The national cancer strategy ***Achieving World-Class Cancer Outcomes for England: 2015-2020***[8] outlined 95 recommendations as critical in the ambition to improve all cancer outcomes. The document highlighted the critical role of primary care throughout its main strategic priorities particularly with reference to access to diagnostics, early diagnosis, prevention, screening and the importance of safety netting. Reflective learning using Significant Event Analysis (SEA) was also included.

In addition to this is the ***NHS long-term plan, 2019*** which has indicated that the NHS would need to maximise all efforts at improving cancer survival through earlier diagnosis with an ambition to increase the proportion of cancers diagnosed at stages 1 and 2 from half to three-quarters by 2028[9].

In 2018/19, the majority of primary care practices were grouped to form Primary Care Networks (PCN)[10] across England and recently, a PCN direct enhanced service contract was published. The publication includes a specification for early cancer diagnosis, covering three key areas in which a PCN is required to:

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[5] Car, Lorainne Tudor; Papachristou, Nikolaos; Urch, Catherine; Majeed, Azeem; El-Khatib, Mona et al. (2016). Preventing delayed diagnosis of cancer: clinicians' views on main problems and solutions.

[6] https://www.cancerresearchuk.org/about-us/cancer-news/press-release/2019-12-04-a-quarter-of-cancer-patients-experience-avoidable-delay-to-diagnosis

[7] Macmillan Cancer Support (2013) *Improving Care for People with Cancer. Putting cancer patient experience at the heart of the new NHS*, London: Macmillan Cancer Support.

[8] NHS England, 2017: Achieving World Class Cancer Outcomes: Progress report 2016-2020

[9] NHS Long Term Plan (2019) https://www.longtermplan.nhs.uk/

[10] https://www.england.nhs.uk/wp-content/uploads/2020/03/network-contract-des-specification-pcn-requirements-entitlements-2020-21.pdf

- Review referral practice for suspected cancers, including recurrent cancers
- Contribute to improving local uptake of National Cancer Screening programmes
- Establish a community of practice (this includes peer to peer and the wider local and cancer alliance footprint

This new approach to collaborative working across primary care will undoubtedly require the provision of planned and relevant education around cancer.

2.3 Primary Care and Cancer

2.3.1 Cancer diagnosis

In England, primary care providers play an important role in the cancer pathway, as they are often the first point of contact for patients. Patients with suspected cancer symptoms are investigated in primary care as a first step, or referred straight through on an urgent cancer pathway to secondary care according to Nice Guidelines for Suspected Cancer (NG12, 2015)[11]. With the emergence of Rapid Diagnostic Centres (RDC), the routes for referrals will gradually change. The roll-out of new RDCs will upgrade and bring together the latest diagnostic equipment and expertise for both non-specific symptoms and tumour specific pathways. These newer ways of supporting cancer diagnosis will require supportive education to optimise patient outcomes.

Figure 1*: The primary care pathway based on the National Patient Safety Agency (Delayed diagnosis of cancer thematic review, 2010).*

Evidence has shown that GPs are faced with challenges with diagnosing cancers, as they are mostly worried about missing cancers coupled with the fact that as much as they are expected to diagnose cancers earlier, they

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[11] https://www.nice.org.uk/guidance/ng12

also have a responsibility to ensure that they are prudent with their use of NHS resources[12]. Due to this complexity in the selection of patients for investigation[13], they have to consider balancing the risk of later diagnosis against over-investigation of patients (especially those who are unlikely to have cancer) with resultant costs to the patient and to the health care system. Moreover, they would need to assess the potential harms from invasive tests, including over-diagnosis of incidental low-risk cancers. Over-referral of low-risk patients can extend waiting times for diagnostic tests and potentially delay diagnosis in those who do have cancer[14].

2.3.2 Supporting people living with cancer

Whilst there has been progress in early detection and treatment of many types of cancers, this has led to an increase in the numbers of people living with cancer. People living with cancer report significant levels of practical, personal and emotional support needs, many of which are largely unmet and are likely to result in high demand for primary and urgent care services. Although evidence shows that GPs are willing to have a greater role in cancer follow up, management of physical and psychological effects of cancer and its treatment, there are concerns about the level of knowledge and expertise that GPs and other primary care staff have to do this[15]. Nonetheless, there are cancer support groups that offer specialist health care and also help patients in dealing with the social, emotional and practical impacts of cancer (e.g. Macmillan Cancer Support; Cancer Research UK and a range of voluntary and statutory cancer support groups) which primary care staff should be aware of so that patients can be appropriately signposted to available support.

2.3.3 Primary care workforce role in cancer care

According to the Lancet Oncology Commission report[16], primary care will generally be unable to cope with the rising demand for cancer care, which is predicted to double within the next 15 years. However, with radical improvements in diagnostic services, cancer education and training, and policies that encourage integration between primary and specialist care, primary care staff could be the key health care professionals that would contribute majorly to meeting this growing demand for cancer care because of the growing emphasis on early diagnosis and on patient experience during and after treatment. Based on this, if primary care is required to play a larger role in the health care of cancer patients, the significant challenge would be on how to effectively equip this workforce in fulfilling this role for cancer prevention, early detection, survivorship, and palliative care.

Moreover, as there is a rising expectation for people with cancer and their families to access care that is much closer to home, continuous, and coordinated—with a seamless journey between different care settings such as primary care practices, hospitals, cancer centres, and palliative care services, there is an indication for much

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[12] https://www.bjfm.co.uk/early-diagnosis-challenges-and-opportunities-for-gps

[13] Hamilton, 2010, cancer diagnosis in primary care

[14] Emery, 2015. https://www.mja.com.au/journal/2015/203/10/challenges-early-diagnosis-cancer-general-practice

[15] Linden and Love et al., 2016. Managing the consequences of cancer care in primary care

[16] Rubin et al., 2015. The expanding role of primary care in cancer control. https://www.thelancet.com/journals/lanonc/article/PIIS1470-2045(15)00205-3/fulltext

more effective integration between primary and specialist care so that patients can effectively access the full array of care they need.

The Lancet report then pointed out a range of measures that could be introduced for better integration of primary and secondary care, to ensure that primary care staff have the necessary information and skills to fulfil this critical role in cancer care. **These would include better access to diagnostic tests underpinned by comprehensive guidelines; improved education and support (information and skills); new models of shared care between primary care and oncology**; **greater communication with specialists & easy referral back to hospitals**; **and robust monitoring systems for detecting recurrence and in managing adverse effects of treatments**.

In summary, as stated above that the roles of GPs in early diagnosis of cancer have been identified as pertinent in cancer patients care journey, it is important to also consider, firstly, that it could be extremely challenging for them considering the wide variants of cancers that they see. Secondly, the changing complexities of the cases with many patients having vague symptoms and sometimes multiple morbidities which need to be recognised and adequately managed. Thirdly, investment in primary care generally has fallen well behind investments in hospitals, and since 2009, there has been a declining trend in GPs head count/ population accompanied by significant difficulties in recruitment and retention, with the profession ceasing to be the first choice of career for most foundation doctors[5]. Likewise, for nurses, primary care and community-nursing services contracted between 2010 and 2014 with a growing dependency on agency staff. **These challenges impact directly on the education of these health professionals because when services are under pressure, educational resources and time are easily sacrificed.**

2.3.4 General Practitioners (GPs) and cancer referrals

NICE Guidelines (NG) for suspected cancers were published in 2015 (NG12) to advise GPs according to both suspected cancer site and/or symptoms as to when they should refer urgently to secondary care for further assessment. Patients referred urgently on a 2- week wait pathway are required to be assessed by the hospital team within 2 weeks of the GP referral. NG12 works on the basis that there is a 3% risk that referred patients would have an underlying cancer diagnosis, such that the vast majority of those referred will not have cancer. In addition, NG12 also helps to identify various tumour pathways that work to optimal pathways; for example, if a GP requests a chest X-ray which looks suspicious (i.e. possible lung cancer) this will be fast tracked to a Computed Tomography (CT) scan without the need for the GP to make any additional requests. If the CT scan suggests a likely lung cancer, this automatically triggers a review by the hospital cancer team. Throughout the referral process, it is important that the referring GP has a robust safety netting process in place so that patients do not slip through the net.

For the above to work optimally, it is vital that GPs are familiar with NG12 and with optimal and/or local pathways. Ongoing education is critical to ensure that GPs are updated with respect to any changes in referrals to ensure that pathways work efficiently, and patients are assessed as quickly as possible.

At the time of preparing the strategy, there were several programmes of work looking at revising pathways along with the development of RDCs, which will potentially affect suspected cancer referrals from primary care.

2.3.5 Primary care education

In order to ensure an effective approach to early cancer detection and diagnosis in primary care which would enable patients to get on the right pathway at the earliest opportunity, the health service needs to ensure that GPs are supported in a system that promotes investigative testing more than it does currently. In the cancer strategy document mentioned above, **it was stressed that Health Education England needs to work with the Royal College of General Practitioners (RCGP) to consider updating GP training to include an increased focus on investigative testing for cancer**. Furthermore, primary care would generally need to develop effective safety netting approaches in monitoring patients sent for investigative tests. This will ensure test results are reported and communicated, and that any abnormal results are followed up promptly and appropriately. Apart from supporting GP's education in providing adequate care to people with cancer, it is important that other primary care staff (i.e. ANPs, PNs, Support Staff and Administrative staff etc.) are also equipped with sufficient knowledge, skills and support that help to develop their confidence and competence in caring and supporting people affected by cancer.

Whilst it is also crucial that positive information about public awareness and health promotion approaches on lifestyle changes need to continue, most importantly, as primary care is more amenable to intervention, sustainable efforts should be directed at educational interventions to improve primary health care professionals' ability and skills in detecting cancer. If survival rates of cancer patients would improve, then, detecting cancer early and treating them at an early stage would be fundamental for any cancer plan.

According to ***Health Education England report (2016): Improving safety through learning***, there is a lingering need for commitment to improved patient safety[17] as poor quality, inconsistent and interrupted training can be linked to a higher patient safety risk, in addition to unconducive working and learning environments.

Education and training of health care staff at all levels are vital in improving patients' safety as they enable breakdown of barriers to providing safe care and thereby lead to the creation of an environment where patients are at the centre of care, are treated with openness and honesty and where staff can focus on patients' needs[3]. It also provides an opportunity for staff to learn from errors made. The scale of the pressures on the NHS has led to an increasing demand for approaches that would maximise the workplace as a learning environment that favours development of skills and competencies incorporating innovative educational approaches and modes of

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[17] Health Education England (2016). Improving Safety through Education and Training

delivery. In order to achieve an effective educational and professional development for the health care workforce, there is a need for adequate information on available courses, time/ duration of courses, cover, appropriate funding and a variety of training opportunities and modes of learning[18].

In fulfilling these requirements, the ***NHS Five Year Forward View (2014) report*** recommended that there should be more investment in primary care, with actions directed at expanding the number of GPs in training, investment in retention schemes and most importantly, the training of more community nurses and other primary care staff.

The RRCGP in conjunction with Macmillan Cancer Support and CRUK have acted on the recommendations from national policies described above and designed a range of projects including the launch of online toolkits to help primary care professionals in supporting their patients following cancer diagnosis. Macmillan GPs work within a Clinical Commissioning Group (CCG) setting. These posts are pump primed by Macmillan with subsequent financial support afforded by the respective CCG. Macmillan GPs continue to receive peer support along with access to resources and education and are key in supporting local education, sometimes facilitated through access to a Macmillan grant. CRUK GPs generally work in Cancer Alliances but are funded through a CRUK grant. CRUK GPs work collaboratively with each other and are frequently involved in the planning and delivery of primary care cancer education often in partnership with CRUK facilitators.

2.3.6 Available online educational toolkits and learning packages

Recently, massive open online courses (MOOC) and small private online courses (SPOC) have taught millions of students in virtual classrooms and introduced changes to learning techniques. A major benefit of online courses is its wide availability –anytime, anywhere and on any device for its delivery. SPOC has been identified as a cost effective way of meeting students' expectations for training as it offered clarity (information, access, registration and content), communication and interactivity[19]. A range of medical education and Continuing Professional Development (CPD) programmes have adopted e-learning approaches that have been found to be provide time and location flexibility and accessibility, low-costs (training and time commitment), user- centred (self-directed learning), standardised course delivery, just-in-time learning, workforce training monitoring and easily updated learning[20].

There are currently a number of educational toolkits and e-learning packages available to those in primary care although in general, these are very specific to those in a GP or PN Role and do not always include provisions for non-clinical Staff.

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[18] Mari Lloyd-Williams, Suzanne Kite, Fiona Hicks, Jennifer Todd, Jason Ward & Mandy Barnett (2006)Continuing Professional Development (CPD) in palliative medicine: a survey

[19] Vaysse et al., 2018. The Impact of a Small Private Online Course as a New Approach to Teaching Oncology: Development and Evaluation.

[20] Ruggeri and Farrington. 2013. A Global Model for Effective Use and Evaluation of e-Learning in Health

Each of these toolkits and e-learning packages take a different approach to accessibility such as the need to register or to access for free, while others incur costs and some count towards CPD points.

Below in Table 1 is a list of some of the resources available which contain an element of cancer education which are relevant to primary care.

Table 1: List of available cancer education resources

Name of Resource (and Hyperlink)	Regional or National Resource	Audience	Accessibility	CPD Points	Identified directly/indirectly in the Survey
Gateway C https://www.gatewayc.org.uk	National	GPs, practice nurses, GPs in training, health care assistants, physician associates and other primary care professionals across NHS England	Register for access to modules	Yes	Yes
CRUK https://www.cancerresearchuk.org/health-professional/learning-and-support	National	GPs and Healthcare Professionals	Register for access to modules	Not known	Yes
Macmillan Learn Zone https://learnzone.org.uk/	National	Health & Social Care Professionals, Macmillan Professionals & Staff, Members of the public, and volunteers	Register for access to modules	Yes	Yes
GP Update/Red Whale https://www.gp-update.co.uk/	National	GP and Healthcare Professionals	Register for access to modules/webinars (Costs for some)	Yes	Yes
Royal College of GPs https://www.rcgp.org.uk/learning.aspx https://elearning.rcgp.org.uk/	National	GPs	Register to access modules. Some are open access	For some modules	Yes
Healthy London https://www.healthylondon.org/our-work/cancer/	Regional	GP and Healthcare Professionals	Generally open access (and signposting to other courses)	For some modules	No
BMJ https://new-learning.bmj.com/	National	GP and Healthcare Professionals	Register to access modules (Cost involved)	For some modules	Yes

Royal Marsden Partnerships (London – hosted by the Marsden) https://rmpartners.nhs.uk/publications-and-resources/videos/	Regional	GP and Healthcare Professionals	Videos – Open access	No	No
Ipswich and East Suffolk CCG: Information sources for primary care	Regional	Primary Care	Produced information sources for primary care staff	No	No
Thames Valley Strategic Clinical Network (Resources for primary care)	Regional	GP and Healthcare Professionals/ Patients	Toolkit, Videos, Information Resources	No	No
Future Learn https://www.futurelearn.com/subjects/healthcare-medicine-courses/cancer	National	Oncology Professionals, Carer and people living with Cancer	Register to access	No	No
E-Learning for Healthcare (HEE) https://www.e-lfh.org.uk/programmes/cancer-in-the-community/	National	GPs and community staff	Open access via The Royal Marsden NHS Foundation Trust but register for access for recognition of completion	Not known	No
E-Cancer https://ecancer.org/en/elearning	National/ International	Oncology Professionals – may be of some relevance	Open access to videos. Register for access to modules.	Yes but not sure if for UK	No
Skills for Health.org	National	Healthcare Professionals	Open Access (signposting to resources) relating to cancer	No	No

The Royal Marsden NHS Foundation Trust - GP Education Events https://www.royalmarsden.nhs.uk/information-gps/gp-education-series https://www.royalmarsden.nhs.uk/information-gps/gp-resources	National	GPs	Open access to presentations. Due to Covid-19 webinars are available as opposed to face to face	No	No
RCNi https://rcnilearning.com/catalogue/list/free/course	National	Nurses	Register to access modules. Other modules require subscription	Yes - some	Yes
Education for Health	National	Primary Care	Offer training to Practices		NO

Cancer Centres such as The Christie NHS Foundation Trust and The Royal Marsden NHS Foundation Trust engage with primary care by providing educational resources that can assist them with cancer management. In 2016, the Cancer Vanguard for Greater Manchester (GM) developed a programme scope in which seven (7) work streams and fifteen (15) projects were identified. One of these work streams was cancer education and as part of this, a project focussing on creating an online platform for cancer education and information for GPs was initiated. The project which was hosted by The Christie NHS Foundation Trust and funded by the GM Cancer Vanguard created *'Gateway-C'* [21]. The online platform was initially piloted within the GM Region in 2017 before being launched nationally in 2018. The resource mainly has a mixture of courses which are supported by CRUK, endorsed by Macmillan Cancer Support and accredited by the RCGPs. The courses are free to access due to funding provided by Health Education England (HEE). In addition, webinars are hosted and users can sign up for them.

The Royal Marsden NHS Foundation Trust[22] created a series of events for GPs to support them in spotting signs of cancer and confidently in order to refer patients promptly. There is a dedicated section on the Trust's website that provides information on events being run by The Royal Marsden NHS Foundation Trust and also contains open access educational hub including GP Updates, webcasts and presentations. The Royal Marsden NHS Foundation Trust also hosts an online resource known as *'Cancer in the Community E-Learning'*.

At The Clatterbridge Cancer Centre NHS Foundation Trust (CCC), the Clinical Education Department has worked with the CMCA to provide training for practice nurses in primary care and also offers the opportunity to visit the cancer centre to understand the range of services provided from treatment and planning to specific cancers and

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[21] https://www.gatewayc.org.uk/

[22] (https://www.royalmarsden.nhs.uk/

additional support services such as Macmillan cancer information and support service. Prior to COVID-19, courses were delivered face-to-face but with the COVID-19 pandemic and the requirements to socially distance, education delivery is moving towards online. This will strengthen the accessibility for those who wish to increase their understanding of cancer education without the need to be released physically from their workplace or practice. In addition to this, the CMCA deliver face to face cancer education sessions as part of their local workforce transformation plans in collaboration with HEE. They have delivered cancer education to a large number of general practice nurses, administrative and clerical workers in primary care setting, in partnership with Macmillan Cancer Support.

Apart from cancer centres, cancer charities such as (CRUK)[23] and Macmillan Cancer Support[24] have produced a number of online resources which are relevant for the primary care workforce. Both of these cancer charity organisations were listed as a 'resource' that people accessed in the all of the surveys that we conducted (Section 4.1.2, page 27). CRUK has a range of learning resources including e-learning and bite-size learning such as videos and podcasts as well as toolkits. Prior to Covid-19, CRUK held regional face to face events and tailored training help at GP Practices. Macmillan Cancer Support also had a range of face to face events but has switched these to online learning to complement the courses already available. Also because of the recent COVID-19 pandemic, Macmillan has recently developed new online courses specifically tailored to those working in primary care e.g. 'Coronavirus: Primary and Community Care' which replaces the previous 'Cancer in Primary Care' course.

There are several organisations including Royal Colleges aligned with the health sector which feature their own online cancer educational resources. Some of these were selected as resources accessed in our GP, PN and HCAs surveys undertaken for the development of this strategy. The RCGP has an e-learning hub[25] with specific cancer resources which includes short courses with toolkits and podcasts and updates. Also to support those working in primary care are Red Whale[26] and British Medical Journal (BMJ) with a range of modules and webinars on the subject of cancer. The Royal College of Nursing's learning website[27] currently has 12(twelve) CPD modules on cancer that can be studied online as well as access to cancer specific journals.

Some universities have also supported primary care cancer education. The University of Liverpool recently held a HEE funded CPD opportunities for primary and community care staff (Feb 2020). The University of Cambridge has a Cancer Group at the Primary Care Unit[28] which is a 'team of multi-disciplinary researchers who focus on cancer screening, detection and early diagnosis research, mainly in the community and primary care setting.

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[23] https://www.cancerresearchuk.org/health-professional/learning-and-support
[24] https://learnzone.org.uk/
[25] https://elearning.rcgp.org.uk/
[26] https://www.gp-update.co.uk/
[27] https://rcnilearning.com/
[28] https://www.phpc.cam.ac.uk/pcu/research/research-groups/cancer-group/

There are also a number of universities that work closely with NHS Cancer Foundation Trusts to support cancer education of their workforce. The University of Chester accredits postgraduate (PG) oncology modules for The Clatterbridge Cancer Centre NHS Foundation Trust. Equally, The Christie NHS Foundation Trust works closely with the University of Manchester.

HEE in fulfilling its vision of skills development of the health care workforce collaborates with several organisations including universities and Cancer Foundation Hospital Trusts. They have their own E-Learning Hub 'E-Learning for Healthcare' [29]which has a full range of resources related to various aspects of health care including the modules with The Royal Marsden NHS Foundation Trust 'Cancer in the Community'.

This literature search was conducted to investigate the online resources (e-learning, podcasts and toolkits) that are readily available to support cancer learning within primary care. The resources listed in Table 1 are not exhaustive and other sources are available. This was not an exercise to assess the effectiveness or suitability of these resources. Also, the proposed online portal seeks to compliment those resources readily available and signpost those in the primary care workforce to resources which are relevant and specific to local practice within the C&M region.

2.3.7 The Clatterbridge Cancer Centre NHS Foundation Trust vision statement

Central to the development of this C&M primary care cancer education strategy is the vision of the CCC as it one of the UK's leading cancer centres providing highly specialist cancer care to a population of 2.4m people across C&M. Thus, it is imperative that CCC takes the role of being a rallying point/ centre that enables the alignment of cancer care services for patients in the region right through diagnosis to treatment and after care support as required by patients throughout their cancer journey.

CCC Mission

To improve health and wellbeing through compassionate, safe and effective cancer care.

CCC Vision

To provide the best cancer care to the people we serve.

CCC Values

- Putting people first
- Achieving excellence
- Passionate about what we do
- Always improving our care
- Looking to the future

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[29] https://portal.e-lfh.org.uk/

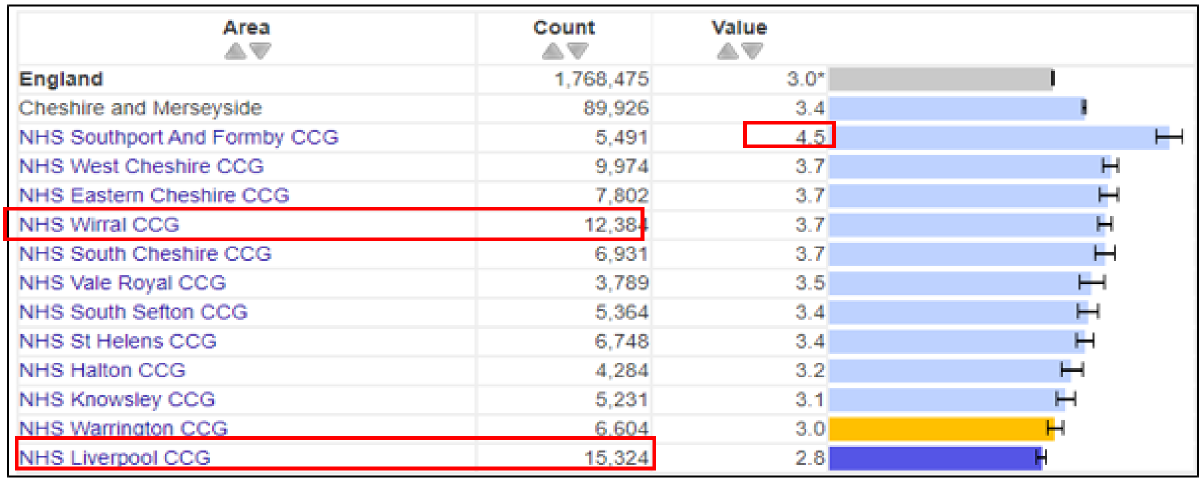
CCC hosts the Cheshire and Merseyside Cancer Alliance (CMCA) that provides leadership and assurance in the delivery of the national cancer strategy. The CMCA mobilises a programme of work that focuses on cancer prevention, screening, early diagnosis and support for patients that are living with and beyond cancer.

This primary care cancer education strategy aligns its objectives with the key national objectives for cancer outcomes and also the vision and ambitions of both the CMCA and The CCC. Supportive and skilful health care professionals in primary care will be essential for the delivery of many aspects of these ambitions and recommendations.

2.4 Local context (Cancer prevalence and screening uptake)

Cancer prevalence in Cheshire and Merseyside has seen a steady year-on year rise in the numbers of people with cancer and has risen from about 36,000 people with cancer in 2009/10 to almost 90,000 in the recently released 2018/19 data from Public Health England (PHE). Based on the 2018/19 data, whilst the number of people living with cancers is recorded as being highest in patients registered in Liverpool CCG (15,300), followed by Wirral (12,300), the proportion (%) out of total registered patients in each C&M CCG is ranked highest in Southport and Formby CCG (4.5%).

Figure 2: Cancer prevalence figures across Cheshire and Merseyside CCGs, 2018/19



Area	Count	Value
England	1,768,475	3.0*
Cheshire and Merseyside	89,926	3.4
NHS Southport And Formby CCG	5,491	4.5
NHS West Cheshire CCG	9,974	3.7
NHS Eastern Cheshire CCG	7,802	3.7
NHS Wirral CCG	12,384	3.7
NHS South Cheshire CCG	6,931	3.7
NHS Vale Royal CCG	3,789	3.5
NHS South Sefton CCG	5,364	3.4
NHS St Helens CCG	6,748	3.4
NHS Halton CCG	4,284	3.2
NHS Knowsley CCG	5,231	3.1
NHS Warrington CCG	6,604	3.0
NHS Liverpool CCG	15,324	2.8

Source: Public Health England, National GP profiles

Whilst a steady yearly rise in cancer prevalence trend has been observed in the region, cancer mortality rate trend has been on a declining trend in C&M since 2001 (366 per 100,000) to 283 in 2017. Despite the declining cancer mortality rate in C&M (per 100,000 pop: all persons, all ages), aggregated 2015-17 data showed significantly higher rates than national average for Knowsley (360 per 100,000), Liverpool (346) and Halton (334) CCGs. These CCGs also were also amongst the top 5 CCGs in the country with the highest cancer mortality rates- Hull being the highest, followed by Knowsley, Manchester, Liverpool and Halton, for that time period.

Table 2: All Persons, Cancer Mortality Rate, 2015-17

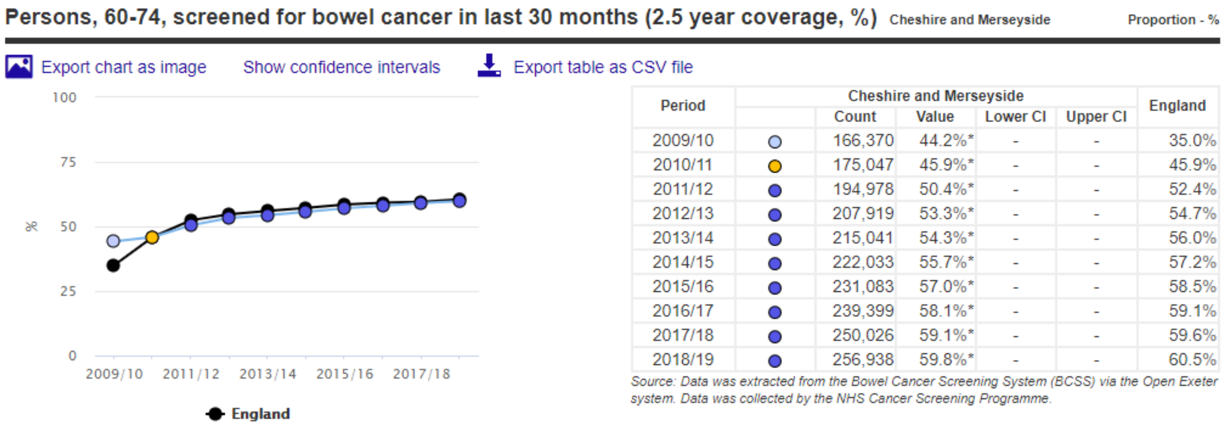
CCG	Cancer Mortality rate (all persons, all ages: 2015-17)
Hull	363.7
Knowsley	360.7
Manchester	359.9
Liverpool	346.8
Halton	334.2
Cheshire and Merseyside	**298.4**
England	**274.3**

Source: Public Health England, National Cancer Registration and Analysis Service, 2015-17

2.4.1 Screening Uptake

C&M breast cancer screening coverage rates in women aged 50-74 years screened in the last 3 years; cervical screening in women aged 25-64 years and people aged 60-74 years screened for bowel cancer in the last 2.5 years have been similar to national average, but with a rather slow year on year rise in coverage. An exceptionally slow increase in coverage rate was recorded for cervical cancer which increased by only 0.7% between 2012/13 and 2018/19 from 73% to 73.7% in 2018/19. Breast cancer coverage rose from 71.1% to 72.1% (1% increase) between 2012/13 and 2018/19. A slightly higher increase in rate was recorded for bowel cancer (6.5%) between similar time periods: 53.3% in 2012/13 to 59.8% in 2018/19.

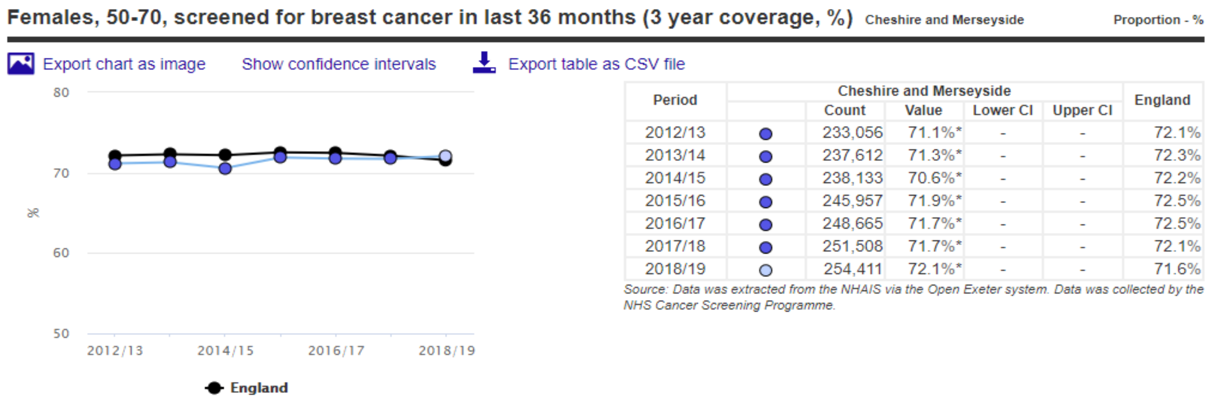
Figure 3: Breast, Bowel and Cervical screening uptake trend in Cheshire and Merseyside STP, 2012/13 to 2018/19



Persons, 60-74, screened for bowel cancer in last 30 months (2.5 year coverage, %) Cheshire and Merseyside Proportion - %

Period	Cheshire and Merseyside					England
		Count	Value	Lower CI	Upper CI	
2009/10	○	166,370	44.2%*	-	-	35.0%
2010/11	●	175,047	45.9%*	-	-	45.9%
2011/12	●	194,978	50.4%*	-	-	52.4%
2012/13	●	207,919	53.3%*	-	-	54.7%
2013/14	●	215,041	54.3%*	-	-	56.0%
2014/15	●	222,033	55.7%*	-	-	57.2%
2015/16	●	231,083	57.0%*	-	-	58.5%
2016/17	●	239,399	58.1%*	-	-	59.1%
2017/18	●	250,026	59.1%*	-	-	59.6%
2018/19	●	256,938	59.8%*	-	-	60.5%

Source: Data was extracted from the Bowel Cancer Screening System (BCSS) via the Open Exeter system. Data was collected by the NHS Cancer Screening Programme.

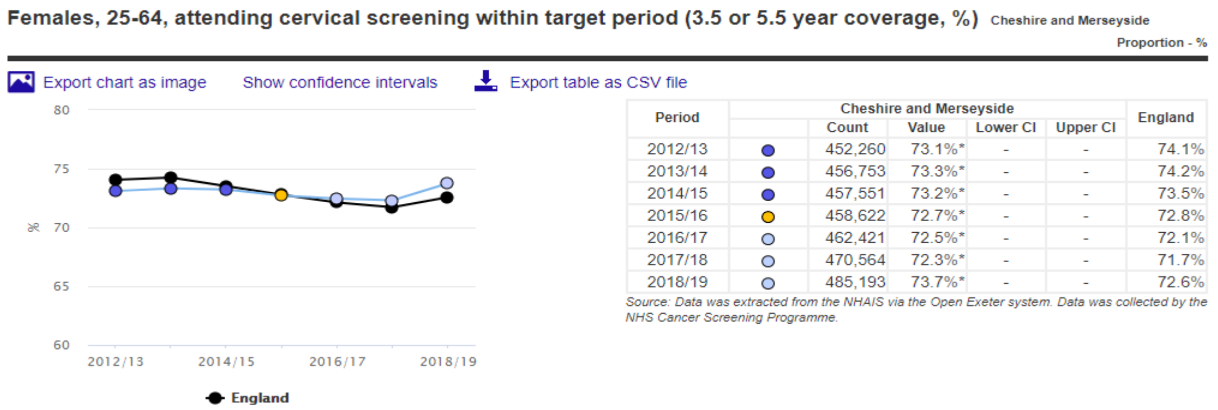


Females, 50-70, screened for breast cancer in last 36 months (3 year coverage, %) Cheshire and Merseyside Proportion - %

Export chart as image Show confidence intervals Export table as CSV file

Period	Cheshire and Merseyside					England
		Count	Value	Lower CI	Upper CI	
2012/13	●	233,056	71.1%*	-	-	72.1%
2013/14	●	237,612	71.3%*	-	-	72.3%
2014/15	●	238,133	70.6%*	-	-	72.2%
2015/16	●	245,957	71.9%*	-	-	72.5%
2016/17	●	248,665	71.7%*	-	-	72.5%
2017/18	●	251,508	71.7%*	-	-	72.1%
2018/19	○	254,411	72.1%*	-	-	71.6%

Source: Data was extracted from the NHAIS via the Open Exeter system. Data was collected by the NHS Cancer Screening Programme.



Females, 25-64, attending cervical screening within target period (3.5 or 5.5 year coverage, %) Cheshire and Merseyside Proportion - %

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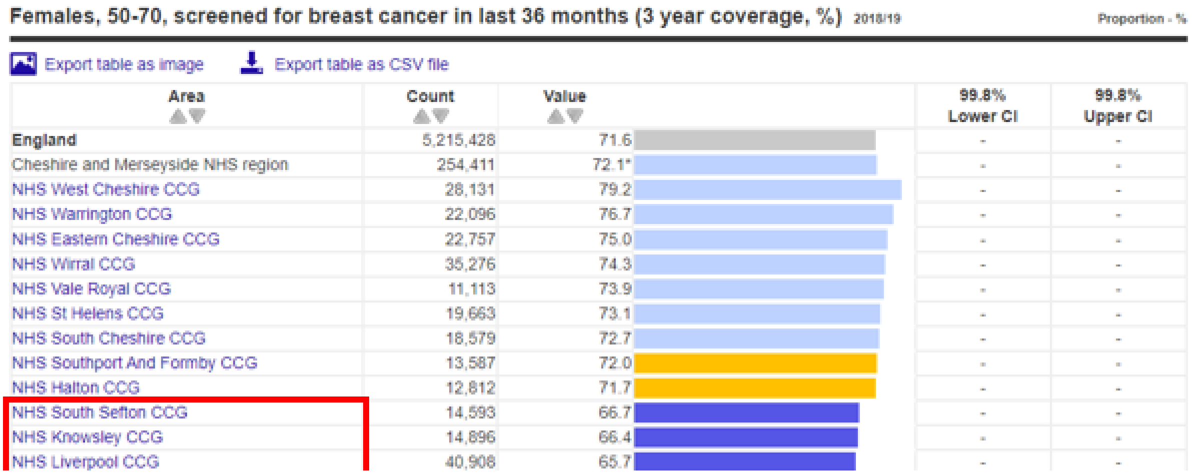
Period	Cheshire and Merseyside					England
		Count	Value	Lower CI	Upper CI	
2012/13	●	452,260	73.1%*	-	-	74.1%
2013/14	●	456,753	73.3%*	-	-	74.2%
2014/15	●	457,551	73.2%*	-	-	73.5%
2015/16	🟡	458,622	72.7%*	-	-	72.8%
2016/17	○	462,421	72.5%*	-	-	72.1%
2017/18	○	470,564	72.3%*	-	-	71.7%
2018/19	○	485,193	73.7%*	-	-	72.6%

Source: Data was extracted from the NHAIS via the Open Exeter system. Data was collected by the NHS Cancer Screening Programme.

Source: Public Health England, National GP profiles

Cancer screening coverage across C&M varies across CCGs with 3 CCGs (South Sefton, Liverpool and Knowsley) having lower than average uptake rates on the three national cancer screening programmes. These areas have also had a consistently lower than average coverage rates since 2009/10.

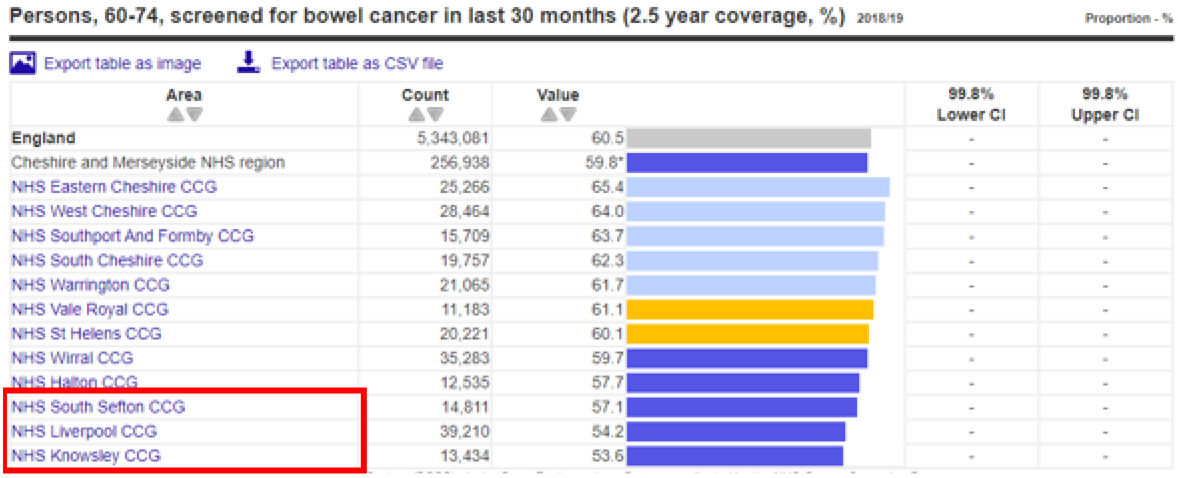
Figure 4: Breast, bowel and cervical screening uptake across Cheshire and Merseyside CCGs, 2018/19



Females, 50-70, screened for breast cancer in last 36 months (3 year coverage, %) 2018/19 Proportion - %

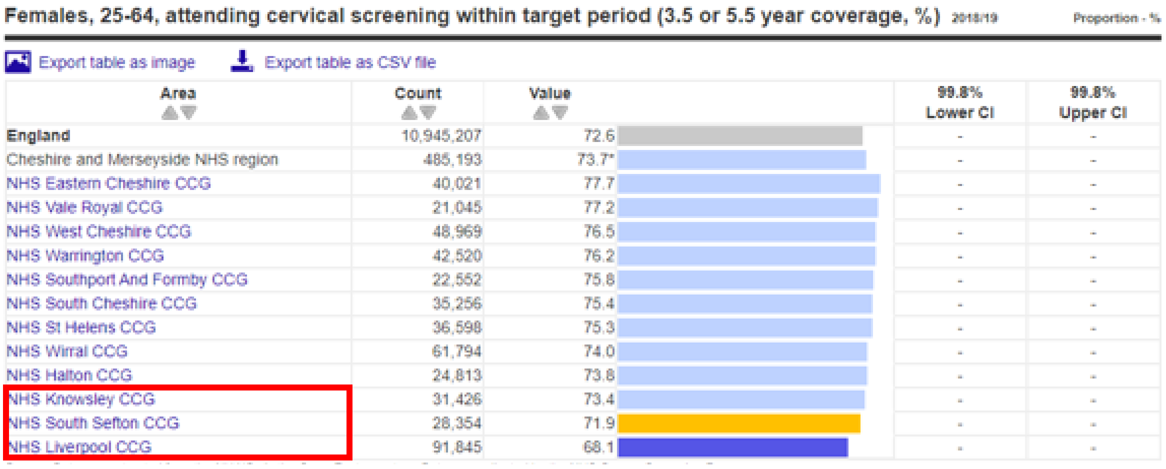
Export table as image Export table as CSV file

Area	Count	Value	99.8% Lower CI	99.8% Upper CI
England	5,215,428	71.6	-	-
Cheshire and Merseyside NHS region	254,411	72.1*	-	-
NHS West Cheshire CCG	28,131	79.2	-	-
NHS Warrington CCG	22,096	76.7	-	-
NHS Eastern Cheshire CCG	22,757	75.0	-	-
NHS Wirral CCG	35,276	74.3	-	-
NHS Vale Royal CCG	11,113	73.9	-	-
NHS St Helens CCG	19,663	73.1	-	-
NHS South Cheshire CCG	18,579	72.7	-	-
NHS Southport And Formby CCG	13,587	72.0	-	-
NHS Halton CCG	12,812	71.7	-	-
NHS South Sefton CCG	14,593	66.7	-	-
NHS Knowsley CCG	14,896	66.4	-	-
NHS Liverpool CCG	40,908	65.7	-	-



Persons, 60-74, screened for bowel cancer in last 30 months (2.5 year coverage, %) 2018/19

Area	Count	Value	99.8% Lower CI	99.8% Upper CI
England	5,343,081	60.5	-	-
Cheshire and Merseyside NHS region	256,938	59.8*	-	-
NHS Eastern Cheshire CCG	25,266	65.4	-	-
NHS West Cheshire CCG	28,464	64.0	-	-
NHS Southport And Formby CCG	15,709	63.7	-	-
NHS South Cheshire CCG	19,757	62.3	-	-
NHS Warrington CCG	21,065	61.7	-	-
NHS Vale Royal CCG	11,183	61.1	-	-
NHS St Helens CCG	20,221	60.1	-	-
NHS Wirral CCG	35,283	59.7	-	-
NHS Halton CCG	12,535	57.7	-	-
NHS South Sefton CCG	14,811	57.1	-	-
NHS Liverpool CCG	39,210	54.2	-	-
NHS Knowsley CCG	13,434	53.6	-	-



Females, 25-64, attending cervical screening within target period (3.5 or 5.5 year coverage, %) 2018/19

Area	Count	Value	99.8% Lower CI	99.8% Upper CI
England	10,945,207	72.6	-	-
Cheshire and Merseyside NHS region	485,193	73.7*	-	-
NHS Eastern Cheshire CCG	40,021	77.7	-	-
NHS Vale Royal CCG	21,045	77.2	-	-
NHS West Cheshire CCG	48,969	76.5	-	-
NHS Warrington CCG	42,520	76.2	-	-
NHS Southport And Formby CCG	22,552	75.8	-	-
NHS South Cheshire CCG	35,256	75.4	-	-
NHS St Helens CCG	36,598	75.3	-	-
NHS Wirral CCG	61,794	74.0	-	-
NHS Halton CCG	24,813	73.8	-	-
NHS Knowsley CCG	31,426	73.4	-	-
NHS South Sefton CCG	28,354	71.9	-	-
NHS Liverpool CCG	91,845	68.1	-	-

Source: Public Health England, National GP profiles

2.4.2 Primary Care Cancer Education across Cheshire and Merseyside

In 2017, over 170 GPs and ANPs across C&M responded to a questionnaire about cancer care and support in primary care, and education was highlighted as a key area to enable colleagues to provide optimal support for their patients. The PCN specifications for early cancer diagnosis was published in April 2020 along with the Quality and Outcomes Framework Quality Improvement Module for early cancer diagnosis. At the time of writing this strategy, implementation of both has been postponed to October 1st 2020 due to COVID-19.

Over the years, primary care cancer education in C&M has been mostly delivered as face- to- face sessions, generally locality based and in some cases supported by the CCGs. Cancer education has also been funded and facilitated by cancer charity organisations such as CRUK and Macmillan Cancer Support and the funding and commissioning arrangements have in some ways led to variations in delivery and some limitations in coordination and standardisation of delivery across C&M workforce. This is partly because CCGs are not mandated to provide or support education in primary care. There has also been inconsistency in coordination of cancer education programmes in the region due to non-recurrent educational grants, which are only available on a short-term basis, and once funding is used, the training is discontinued. In some settings, there has been in-practice education during protected learning time, while in some, there are little or no opportunities for ongoing training and updated knowledge for staff due to work and time pressures.

In supporting primary care professionals in accessing cancer education materials and offering some levels of flexibility to their study time, CRUK, Macmillan Cancer Support and also the recently developed Gateway C by The Christie NHS Foundation Trust, have readily accessible online cancer educational resources. Whilst these resources have useful information on cancer screening, prevention and management, they do not support the unique needs of C&M primary care workforce, as they are not tailored to local needs, referrals and current challenges with cancer diagnosis, survivorship and end of life care of patients in the area.

To address some of these challenges, there is a requirement for the provision of a more coordinated approach that affords every member of the primary care team in C&M the opportunity of accessing a wide range of up to date cancer education resources. These resources would be relevant to local practice and would enable the provision of high standards of cancer care and support to patients at every stage of their journey. This forms the overarching aim of this project and strategy.

This strategy maps out the development of a standardised, equitable, easily accessible and consistent approach to C&M Primary Care Cancer Education. It is important that the primary care cancer education strategy developed for the region identifies current gaps, barriers and enablers to accessing training and creates an opportunity for the development and implementation of a cancer education programme that is sustainable, regularly reviewed and updated.

2.5 Objectives and underpinning principles

To improve cancer survival and the overall quality of life of cancer patients in C&M, there is a need to prioritise the use of evidence-based guidelines, multidisciplinary care and continuing education and professional development to ensure that all staff caring for people with cancer have the appropriate knowledge, skills and competencies to deliver top quality cancer care and support.

Development of a cancer education strategy for training, empowering and upskilling of C&M primary care workforce will guide:

- Availability of an accessible and equitable cancer education portal
- Provision of a consistent and sustainable programme of professional development in cancer education in line with national guidelines
- Proposal for a formal structure for coordination and maintenance of a cancer education centre that monitors competencies of primary care workforce in delivering optimal cancer care.

2.6 Scope of strategy

The strategy highlights recommendations for the provision of a cancer education portal for primary care staff including salaried GPs, GP partners, GP registrars, GP locums, Advanced Nursing Practitioners, Health Care Assistants, Practice Nurses and Administrative (Non- Clinical staff) working across Cheshire and Merseyside. **Cancer education for Community / District Nurses, Hospitals and care homes staff are not within the scope of this project.**

3. Strategy development process

3.1 Project launch

Hosted by The Clatterbridge Cancer Centre NHS Foundation Trust – the project was funded by Macmillan in collaboration with CCC, Clinical Education Department. The steering group committee was launched in September 2019 and the members comprise:

- Associate Director of Clinical Education CCC (Chair)
- Head of Clinical Education CCC (Deputy- Chair)
- Head of Safeguarding CCC
- IM&T Project Manager CCC
- Macmillan GP Lead CCC
- Macmillan Project Manager CCC
- Macmillan Project Support Worker CCC
- Macmillan Partnership Quality Lead
- Macmillan Partnership Manager
- Macmillan Services Project Manager
- Macmillan Project Manager, Aintree
- Macmillan Practice Nurse Champion, Knowsley
- Patient representative

Throughout the duration of the project, there were seven (7) Steering Group Meetings held in total.

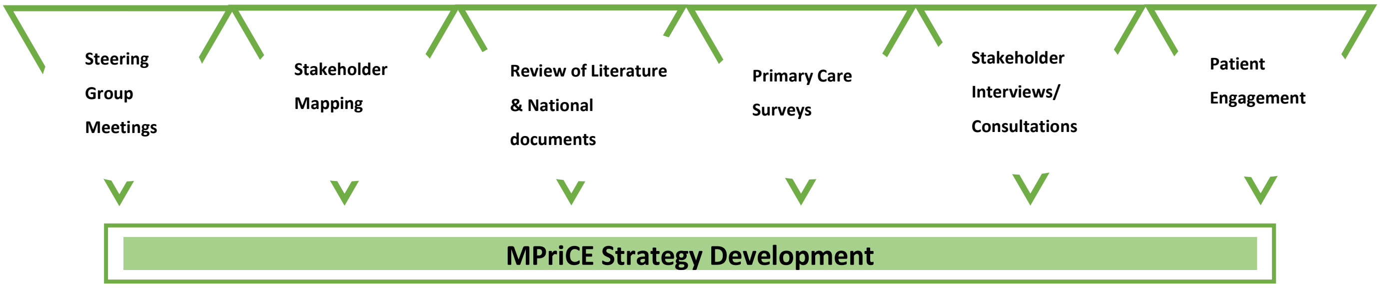
3.2 Project initiation and planning

Following the launch of the steering group, the project documentations- Project Initiation Document; Terms of Reference; Risk and Issues logs and the project timeline were developed. In addition to these, key deliverables were identified and the plan for delivery was agreed.

3.3 Strategy development approach

The strategy was developed using engagement and collaborative approach in order to ensure that the voices and needs of the primary care workforce in C&M were considered all through the phases of the project. The strategy development commenced with a process of stakeholder identification and mapping. Communication and engagement plans were also prepared and implemented. In addition to stakeholder mapping and engagement, surveys were undertaken with the C&M primary care workforce. These were followed with one to one interviews and consultations with key partners that were identified as having primary care cancer educational responsibilities across C&M. In ensuring a more representative approach to the scoping exercise and evidence gathering, those with lived experience were also included. Each of these methods are discussed in the following sections.

Figure 5: Strategy development process



3.3.1 Stakeholder mapping and engagement

Stakeholder mapping and engagement which involved initiating and maintaining relationships with key partners in HEE, RCGP, Royal College of Nursing (RCN), CMCA, Educational Institutions, Secondary and Tertiary Care organisations, IT specialists, web developers and other relevant professionals were identified. This was required firstly to enable engagement with those who could influence the successful implementation of the primary care cancer education project across C&M. Secondly, it created an opportunity to consult with specialists and educators on relevant strategies to address the issues identified and that would enable effective uptake of the educational resources for the primary care workforce in the area. Thirdly, it heightened the possibilities of creating sustainable strategies required for effective implementation during the second phase of the project. In engaging with stakeholders, project brief, project progress and evaluation reports were regularly communicated to key partners.

3.3.2 Surveys

At the time that the survey was undertaken, Cheshire and Merseyside Health Care Partnership was made up of 12 (twelve) CCGS with approximately 380 general practices. There have however been recent changes in the region as some Cheshire CCGs have merged.

Figure 6: General practices within Cheshire and Merseyside CCGS

Cheshire and Merseyside CCGs	Number of General Practices
Eastern Cheshire	24
Halton	14
Knowsley	25
Liverpool	93
South Cheshire	17
South Sefton	30
Southport and Formby	19
St. Helen	34
Vale Royal	12
West Cheshire	36
Warrington	28
Wirral	50
TOTAL	**382**

The sample population for the survey was drawn from the primary care workforce across C&M comprising GPs, ANPs, PNs, HCAs and Non- Clinical staff. The survey sample did not include the new and emerging roles in primary care such as physician associates, clinical pharmacists etc. as the scope of the project focuses on the historic core primary care team i.e. GPs, PNs and HCAs and Administrative & Non-Clinical staff.

In determining the sampling frame and sample size required for the primary care workforce survey across C&M, an estimate of the workforce headcount was obtained from published NHS digital data. Based on June 2019 records, C&M had 2252 General practitioners (GP partners, salaried GPs, GP retainers, GP registrars and GP locums); 192 Advanced Nurse Practitioners; 821 Nurses (Nurse Specialists, Extended Role Practice Nurses, Practice Nurses, Nursing Partners, Nurses Dispensers, Trainee Nurses), 432 Health care assistants and 4,638 Administrative & Non-Clinical staff. These figures reflect estimates of the workforce for that period regardless of individuals working across multiple roles and areas; contracted hours and length of contract. Moreover, it does not include GPs working in prisons, army bases, educational establishments, specialist care centres, walk in centres and alternative settings outside of traditional general practice. Using a population of 7,903 for the primary care workforce count, confidence level of 95%, margin of error of 5%, a sample size of 366 of the total primary care workforce was required.

Given the experience of the 2017 cancer primary care survey, it was apparent that engagement, completion and submission of surveys would be challenging. In light of this and the difficulty accessing direct contact details, it was decided that in order to maximise response rate, that surveys should be disseminated to all primary care workforce in the region.

Survey dissemination was conducted in 2 phases: in the first phase, surveys were disseminated to GPs and ANPs while in the second phase, they were sent to PNs, HCAs and Administrative & Non-Clinical staff.

GPs and ANPs online survey questionnaires via survey monkey were disseminated in October 2019 to all GPs in Cheshire and Merseyside. In ensuring an effective dissemination of GPs, PCN Clinical Directors, the HEE C&M and CCG Cancer Managers were contacted to help with the dissemination of the survey links. Survey responses across C&M CCGs were closely monitored to quickly identify areas with low responses and to direct efforts into disseminating the survey links to those areas. Reminder emails were sent out two weeks after the survey opened. The survey was closed on the 29th of November 2019 and analysis of the findings was undertaken, with the creation of interim reports. GP survey interim reports were shared with those that requested for a copy and provided their email addresses. The major limitation with the GP survey dissemination was the reliance on Clinical Directors, HEE and CCG Cancer Managers (aka gatekeepers) to support the survey dissemination as the project team did not have direct contact email addresses of the GPs.

PNs and Administrative & Non-Clinical staff surveys were developed, validated and piloted before sending out in January 2020 and the survey was open for 6 weeks (closed on the 28th of February 2020). In ensuring a more effective dissemination strategy, a process of collating email addresses of practice nurses and practice managers across all C&M CCGs was undertaken. For the CCGs where email addresses were not available, Practice Nurse Leads and Practice Manager Leads in those CCGs were contacted to support dissemination and to encourage completion of the surveys. In a similar way to the GP and ANP surveys, survey responses were closely monitored throughout the period. After two weeks, reminder emails were sent round to general practices while GP Leads, Practice Nurse Leads and Workforce Leads were contacted to help disseminate to areas with low responses. One of the issues identified during the dissemination of the surveys was that in a particular CCG, the staff were unable to access the survey link due to IT firewall issues. In addressing this issue, C&M GP Workforce Lead helped to pass on information to the affected CCG to enable their IT setup to support access to the survey links.

3.3.3 Consultations and one to one interviews

Key partners were identified based on their roles and contributions to primary care workforce education and most importantly, cancer education in the region and one to one interviews were conducted with six (6) participants:

- Clinical Oncologist at CCC
- General Practice Forward View (GPFV) Transformation Programme Manager
- Macmillan GP Advisor
- Workforce Transformation Lead
- C&M Primary Care Academy Training hub Lead
- Practice Nurse Champion

One to one interviews of an hour's duration enabled us to gather views around primary care cancer education along with important factors felt to be required for the successful provision of an online C&M primary care cancer education portal for the region.

3.3.4 Patient engagement

The experience of those with lived experience whether a patient or carer is vital for us to understand where reflections, lessons learnt and ultimately education can support improvements in the overall experience of cancer care. People were recruited by approaching those who already provide a lay voice along with specific patient groups.

3.4 Evidence Gathering

On completion of all surveys, interviews and discussions, data analysis was undertaken. For the GP, ANP, PNs, HCA and admin staff surveys, descriptive and comparative analysis were undertaken while with the professional interviews and patient experiences, thematic content analysis was employed. The findings were then triangulated to provide a complete picture of the strategy and are presented in the next chapter.

4. Findings

4.1 Survey Findings

This section contains an outline of the survey results for the three survey groups engaged with for this strategy report:

(i) General Practitioners (GPs) / Advanced Nursing Practitioners (ANPs)
(ii) Practice Nurses (PN)/ Health Care Assistants (HCAs)
(iii) Administrative/ Non-Clinical staff

It also includes the findings of the one to one interviews undertaken with selected health care professionals with vast experience in coordinating and delivering cancer educational programmes across C&M. Six (6) professionals took part in the interview. Finally, a summary of the consultations with people with previous cancer experience and/ or currently receiving cancer treatment is also presented.

4.1.1 GPs and ANPs surveys

GPs and ANPs surveys were open for 6 (six) weeks. Ahead of dissemination of survey links through Survey Monkey, relevant gatekeepers at each CCG were identified and contacted to support survey dissemination to participants (GPs/ ANPs). Participants received emails containing the link to the survey. On clicking the link, the survey opens with an introductory page, which has the aims, objectives and the survey closing date. The subsequent pages contain the survey questions for participants to complete. Follow up reminder emails were sent 2 (two) weeks before survey closing date. One hundred and eighteen (118) completed questionnaires were received with all survey questions answered by all participants.

4.1.2 PN/ HCAs/ Administrative & Non-Clinical staff surveys

On completion of GP and ANP surveys, the second round of surveys to PN, HCAs and Admin staff were prepared, validated, piloted and inputted into survey monkey. A dissemination strategy that would allow monitoring of survey completion across CCGs was put in place. Key gatekeepers in each CCG were identified, contacted and their support with sending the surveys out was sought. Following this, the survey was open for approximately 6 (six) weeks with reminder emails sent twice during the period. One hundred and forty six (146) PNs and HCAs took part in the survey. Twenty-one (21) participants' questionnaires were excluded because they were not completed by PNs or HCAs, therefore responses of one hundred and twenty five (125) participants were analysed. For the Administrative & Non-Clinical staff survey, two hundred and thirteen (213) took part. For the survey data analysis, we performed descriptive analysis with variables described by numbers (counts) and proportions (percentages). Categorical variables were also expressed as counts and frequencies (percentages). The table below provides an overview of the survey findings for the three groups.

Table 3: Outline of GPs and ANPs; PNs and HCAs, and Administrative & Non-Clinical staff survey findings

	GPs&ANPs	PNs&HCAs	Administrative & Non Clinical staff
Survey response by CCG	West Cheshire (16%) Eastern Cheshire (13%) South Sefton (13%) Liverpool (12%) Other CCGs (47%)	Wirral (23%) Warrington (18%) Liverpool (14%) Other CCGs (45%)	Liverpool (17%) West Cheshire (14%) Wirral (14%) Warrington (13%) Other CCGs (41%)
Role	GP partner (47%) Salaried GP (22%) GP Registrar (19%) ANP (5%) Others (7%)	Practice nurse (74%) Health care assistant (22%) Nurse Clinician/ practitioner (3%)	Receptionist/ clerical staff (49%) Manager (35%) Medical secretary (11%) Others (5%)
Time spent learning about cancer	>4 hours (52%) 1-4 hours (45%) No time (3%)	>4 hours (15%) 1-4 hours (60%) No time (23%)	-Never (48%) -6 months ago (18%) -More than a year ago (17%) -Last month (11%) A year ago (6%)
Importance of cancer education to profession (on a scale of 1 - 10 where 10 is extremely important)	<5 (7%) 5 (5%) >5 (88%)	<5 (6%) 5 (12%) >5 (80%)	<5 (9%) 5 (20%) >5 (71%)
Preferred learning method (all that apply)	-Face to face (86%) -Online interactive modules (57%) -Reading (42%) -Others (e.g. videos, mobile apps etc.) 17%	-Face to face (86%) -Online interactive modules (56%) -Reading (30%) -Others (e.g. videos, mobile apps etc.) 34%	-Face to face (75%) -Online interactive modules (64%) -Reading (28%) -Others (e.g. videos, mobile apps etc.) 40%
Finding out about cancer education	-Looking online (62%) -Via email alerts (58%) -Via CCG communication bulletins (40%) -Local GP cancer lead (25%) -Adhoc basis (24%) -Fliers (21%) CRUK facilitators (6%) -Others (4%)	-Looking online (40%) - Via CCG communication bulletins (64%) -Via email alerts (40%) -Local GP cancer lead (11%) -Adhoc basis (12%) -Fliers (15%) -Macmillan GP lead/ professionals (17%) -Cancer Centres (4%) -CRUK facilitators (2%) -Universities (2%) -Others (6%)	- Via CCG communication bulletins (26%) -Looking online (21%) -Via email alerts (13%) -Adhoc basis (10%) -Local GP cancer lead (8%) -Macmillan GP lead/ professionals (8%) -Fliers (1%) -CRUK facilitators (1%)

	GPs&ANPs	PNs &HCAs	Non Administrative & Non – Clinical staff
Standard resources accessed in the last 12 months for cancer education	-GP update/ Red Whale (46%) -RCGP (44%) -Macmillan including delivery by Macmillan GPs (33%) -NB Medical (15%) -CRUK including local facilitators (11%)	-RCN (22%) -Macmillan including delivery by Macmillan GPs (22%) -Nursing Times (13%) -CRUK (6%) -University cancer related modules/ programmes (1%) -Other (e.g. Journals, Meetings, preceptorship etc.) 31%	-Reading (23%) -Face to face (17%) -Online interactive modules (11%) -Macmillan (6%) -Videos (You-tube) (3%) -CRUK including local facilitators (3%)
Would an online cancer education portal as a 'centralised' place for cancer education resources be useful?	Yes (98%) No (2%)	Yes (58%) No (11%)	Yes (76%) No (24%)

4.1.3 CCG Participation

Adequate planning and monitoring of the survey dissemination was undertaken to ensure representation across all C&M CCGs, however, there were more responses from some CCGs than others in the three (3) survey groups. For the GP and ANP surveys, half of all survey respondents were from West Cheshire (19%); Eastern Cheshire (15%); South Sefton (13%) and Liverpool CCG (12%) whilst for PNs &HCAs and Administrative & Non-Clinical staff, there were more participants from Wirral, Warrington, Liverpool and West Cheshire CCGs (Table 3).

4.1.4 Roles

A breakdown of roles and job titles of participants showed that for GPs and ANPs survey, responses were higher from GP partners (47%), followed by salaried GPs (22%), GP registrar (19%) and only 5% from ANPs.

For PN and HCAs, 74% of the respondents were practice nurses, 23% were health care assistants and 4% in other nursing roles. For responses where the stated role was ANP, these were excluded from the PNs and HCAs data analysis. Receptionists completed almost half of the admin staff survey (49%), followed by managers (35%) and medical secretaries (11%).

4.1.5 Time spent learning about cancer

Hours spent annually on cancer education varied amongst primary care professionals. Whilst PNs and HCAs generally spent 1-4 hours (60%) on learning about cancers, half of GPs spent more time (i.e. greater than 4 hours) on cancer education annually. For admin staff, data showed that almost half of this group (48%) have never had any form of cancer education while 17% have not had any training in the last year.

4.1.6 Importance of cancer education to profession

For all the groups surveyed, an indication of the relevance of cancer education to their professions was vastly expressed. Using a scale of 1 to 10 where 1 was to indicate least importance and 10 extreme importance, a greater proportion of the participants indicated their scale of importance higher than 5: 88% for GPs and ANPs; 80% for PNs and HCAs and 71% for Administrative & Non-Clinical staff.

4.1.7 Preferred learning methods

In identifying preferred learning methods, participants had to choose from a list of a range of methods and were permitted to tick more than one method. For the three survey groups, face-to-face methods, the use of online interactive modules and reading were favoured by the participants.

GPs were further asked to indicate when they would prefer to attend face to face education and a greater proportion specified that they would prefer such sessions during their protected learning times. Also in relation to face to face cancer education for PNs and HCAs and Administrative & Non-Clinical staff, whilst some indicated that they had never attended any face to face education (PNs and HCAs- 43%; Administrative & Non-Clinical staff - 69%) and did not know if their CCG provided cancer education. The others that have attended face to face sessions in the past stated that the sessions attended were within their CCG footprint, some in their surgeries, within their PCNs and within C&M. There were only 21% and 14% of PNs and HCAs, and Administrative & Non-Clinical staff respectively that signified that they have had problems accessing relevant cancer education courses.

4.1.8 Finding out about cancer education

Important aspects of enrolling for a course is being aware and having some information about the course. This was investigated in the survey and participants indicated that cancer education courses information were passed on to them mostly via their CCG communication bulletins (GP-25%, PNs and HCAs- 64%, and Administrative & Non-Clinical staff - 26%). Overall, for the three(3) survey groups, they find out about available cancer education courses mainly from online sources, via email alerts, CCG communication bulletins and from their local GP Cancer Leads.

Apart from finding out about cancer education and the preferred learning method, primary care professionals were requested to indicate how they generally access any form of cancer education. The top three ways selected were reading materials, attending face to face sessions and via online interactive materials.

4.1.9 Standard resources for cancer education accessed in the last 12 months

The top three cancer education resources accessed by GPs and ANPs were from Red Whale, the Royal College of GPs, and from Macmillan Cancer Support which includes courses delivered by Macmillan GPs. The top three for PN and HCAs were from the Royal College of Nursing, Macmillan and Nursing Times while for Administrative &

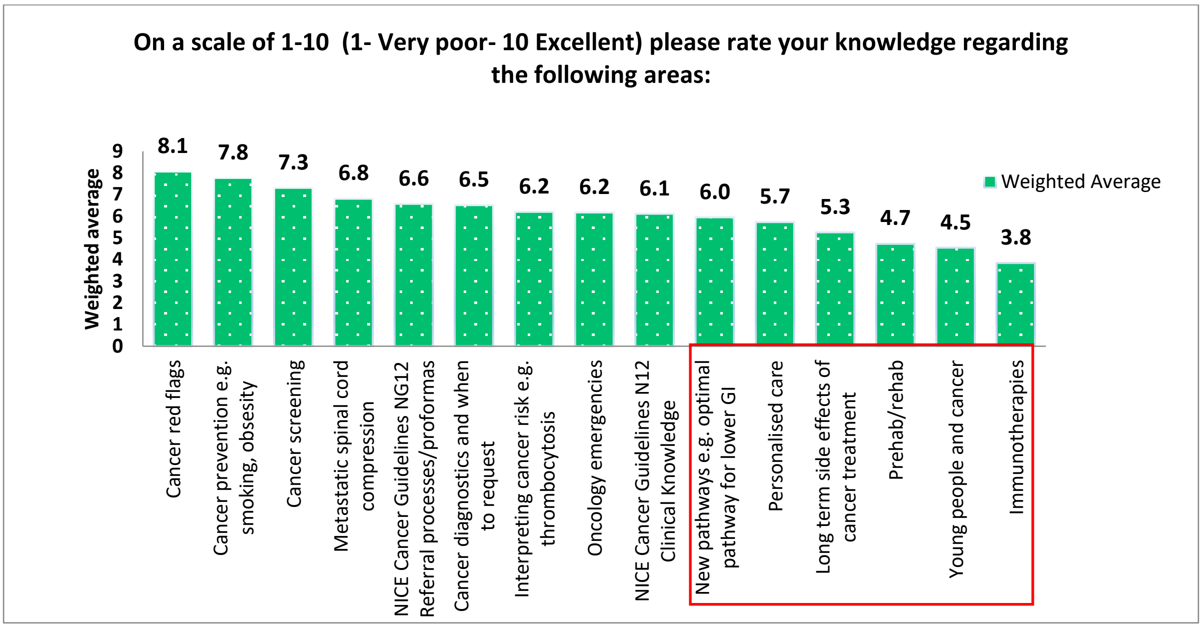
Non-Clinical staff, their cancer education was mainly from reading materials, face to face education and from online interactive modules.

GPs and ANPs were further asked to specify the maximum amount that they were willing to pay to attend a course and the highest price range preferred (by 32%) was £50-£100. Only 1% of the participants specified that they would pay above £250.

4.2.0 Level of knowledge and confidence in selected cancer areas and topics

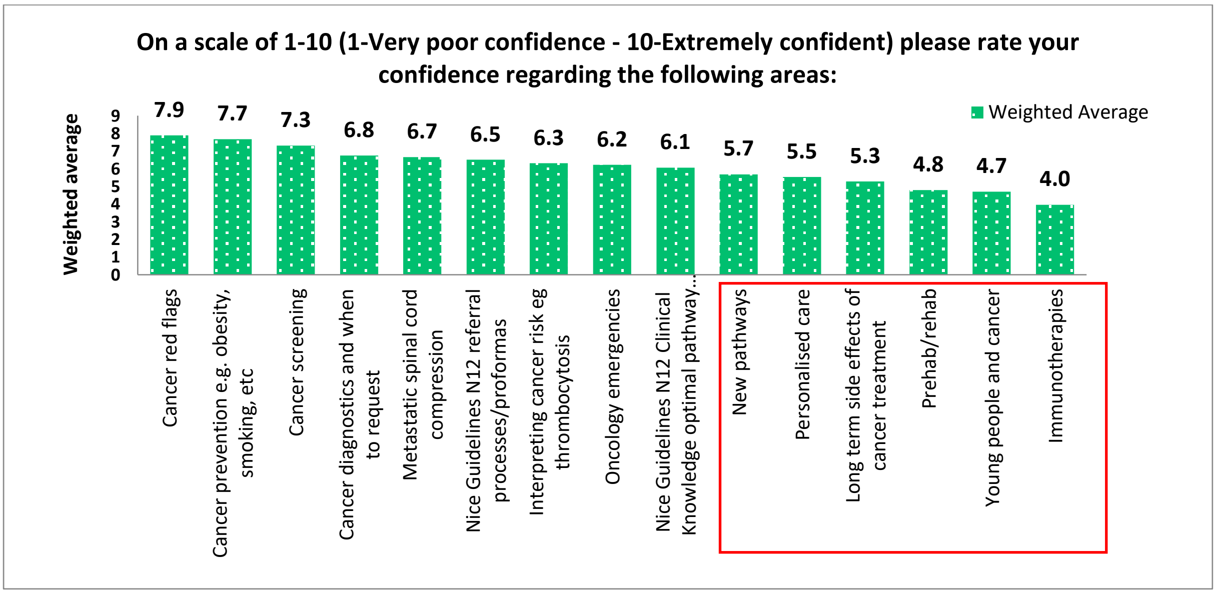
The level of knowledge and confidence of the professionals in selected cancer education topics were investigated in the surveys. GPs and ANPs were required to select from a scale of 1 (very poor knowledge) to 10 (excellent knowledge) in the fifteen (15) cancer topic areas that were listed.

Figure 7: Weighted average of GP/ANP knowledge on selected cancer topic areas



According to the weighted average of the level of knowledge and confidence indicated by GPs and ANPs, the top three areas that considerably 'good' knowledge and confidence (>7) were selected were in cancer red flags, cancer prevention and cancer screening (Fig. 8). Knowledge and confidence levels less than 6 (six) were indicated for new pathways (e.g. optimal pathway for lower GI), personalised care, long-term side effects of cancer treatment, prehab/ rehab, young people and cancer and immunotherapies.

Figure 8: Weighted average of GP/ANP confidence on selected cancer topic areas



In addition to the assessment of the level of knowledge and confidence in these areas, GPs were required to indicate other cancer topic areas which were not included in the list, but which they would be interested in receiving more education and training. The responses obtained were:

- Support systems available for carers;
- Cancer risk stratification (i.e. number needed to screen);
- Haematological cancers;
- Cancer referral process (appropriateness and diagnostic yield);
- Melanoma;
- Looking after people receiving chemotherapy or radiotherapy-risks;
- Palliative care management and end of life care.

For PNs and HCAs, a total of thirty seven (37) selected statements were put together to assess their level of knowledge and competence on a number of cancer topics. The statements were adapted from validated survey questionnaires on cancer education for primary care staff and relevant cancer care textbooks. There were 11 statements relating to cancer screening and early diagnosis; 3 on oncology; 5 on cancer care; 2 on personalised care; 3 on communication skills; 4 on survivorship; 4 on palliative care/ EOL and 6 on supporting other health care professionals, staff resilience and coping strategies.

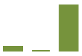
PNs and HCAs indicated a great level of awareness and knowledge mostly in statements relating to cancer risk factors; signs and symptoms of common cancers and in building resilience and coping strategies required for their general wellbeing (see Table 4).

Table 4: Knowledge and competence of PNs and HCAs – proportion that agreed with statements

	I Agree	I Disagree	I am Unsure	
2. I know the lifestyle risk factors associated with cancer.	**92%**	0%	8%	
3. I am aware that smoking is the largest cause of cancer in the UK.	**84%**	3%	13%	
4. I am aware that being overweight/obese is the UK's biggest cause of cancer after smoking.	**83%**	2%	15%	
5. I am aware that over exposure to UV radiation (from sunlight) is a risk factor for melanoma (skin cancer).	**97%**	1%	2%	
6. I am aware that eating processed meat is a risk factor for certain types of cancer.	**82%**	2%	16%	
9.I am confident providing information, support and advice relating to national cancer screening programmes.	**65%**	14%	22%	
13. I understand the signs and symptoms for the common cancers	**75%**	6%	19%	
15. I recognise that my role is vital in delivering good cancer care and I understand my own professional/role boundaries.	**75%**	20%	5%	
24. I am able to keep clear and accurate records of patient information in a variety of formats.	**78%**	3%	19%	
34. I am able to recognise the impact of personal pressures and additional work related stress due to patients' cancer symptoms, diagnosis and prognosis on my mental and emotional well being.	**69%**	11%	20%	
35. I have a personal coping strategy that helps me build resilience and improve my general wellbeing at work.	**67%**	24%	9%	
36. I have someone at work who I can go to and discuss how personal pressures and work related stress due to patients' cancer symptoms, diagnosis and prognosis are impacting on my resilience and general wellbeing.	**64%**	16%	21%	
37. I have opportunities to reflect on my practice, areas for development and in applying new knowledge and skills.	**76%**	9%	15%	

For some statements, almost half of the participants agreed with the statements, while the remaining half either disagreed or were unsure of their level of knowledge and competence. This were in statements relating to epidemiology of cancer, implementing Making Every Contact Count (MECC), holistic needs assessment, working with individuals, families and friends in a sensitive way that demonstrates awareness of impact of cancer diagnosis, principles of cancer principles and potential side effects, knowledge of End Of Life tools (EOL), accessing support and signposting (see Table 5).

Table 5: Knowledge and competence of PNs and HCAs on statements – proportion that disagreed or were unsure

	I Agree	I Disagree	I am Unsure	
1. I understand the epidemiology of cancer (e.g. the number of people affected by cancer (prevalence), cancer survival rates in a particular area).	42%	16%	43%	
8. I am able to implement Making Every Contact Count (MECC) with patients.	44%	22%	34%	
10. I am aware of my role and know the range of tests/investigations that may be required in confirming a diagnosis of cancer patients.	46%	11%	43%	
16. I understand the principles of cancer therapies and the range of cancer treatments available (surgery, chemotherapy, radiotherapy, hormone therapy).	56%	16%	28%	
17. I know the range of treatments for cancers and the potential side effects to people affected by cancer.	39%	19%	43%	
20. I know about holistic needs assessment and the recovery package.	40%	25%	35%	
22. I feel confident working with individuals, their families and friends in a flexible and sensitive way that demonstrates awareness of the impact of a diagnosis of cancer, the treatment, dying, death and bereavement.	51%	17%	32%	
27. I know about support services - within and outside of the NHS - that I can help patients to acess e.g. social prescribing.	51%	20%	29%	
28. I understand and can advise on coping strategies and psychological therapies other than drugs to help people cope with their symptoms.	23%	33%	44%	
29. I know the disease-specific prognostic indicators which identify the person affected by cancer may be in the last year of life.	30%	29%	41%	
30. I know the various End of Life care tools.	41%	21%	39%	
31. I know how to access social care, carer support, bereavement support.	45%	22%	33%	
32. I feel confident signposting people affected by cancer to the relevant specialist professionals.	50%	14%	36%	

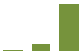
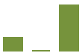
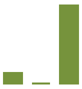
Furthermore, for some statements, there were about 45% and above of respondents who were unsure of their knowledge and competence in:

- Providing health promotion information and support;
- Following NICE guidelines;
- Cancer biology, aetiology, diagnosis and staging;
- Provision of cancer specific support when patients are being reviewed;
- Eliciting concerns about a cancer diagnosis, treatment, prognosis and the dying process.

They also indicated their disagreement with statements relating to:

- Supporting people to self-manage their cancer symptoms; and in
- Supporting other professionals as patients' transition through acute, home care, survival and end of life care (Table 6).

Table 6: Knowledge and competence of PNs and HCAs – proportion that were unsure

	I Agree	I Disagree	I am Unsure	
7. I am able to give health promotion information, support and advice on genetics and cancer.	25%	29%	46%	
11. I understand referral pathways to cancer services following NICE guidelines/local cancer-specific pathways.	38%	18%	45%	
12. I understand the aetiology, biology and pathophysiology in the developemnt of cancer.	22%	26%	52%	
14. I know and can describe approaches to the diagnosis and staging of cancer	18%	30%	52%	
18. I feel confident when supporting a person affected by cancer with their pain and other common symptoms.	25%	24%	51%	
19. I can recognise signs and symptoms associated with acute treatment effects and possible recurrence.	29%	19%	52%	
21. I feel confident in providing cancer specific support when patients attend review.	20%	31%	49%	
23. I feel confident when eliciting concerns about a cancer diagnosis, the treatment, prognosis, the dying process, and what will happen with the person affected by cancer, their friends and family.	26%	21%	53%	
25. I feel confident in acting as a key worker to undertake holisitic needs assessment for a person affected by cancer following their treatment, and providing advice relating to rehabilitation and survivorship.	19%	34%	47%	
26. I feel I am equipped to support people to self-manage their cancer and related symptoms.	18%	35%	47%	
33. I am confident supporting other professionals in helping patients through seamless transitions between the acute and home care, to survival programmes, palliative and end of care.	19%	36%	45%	

For Administrative & Non-Clinical staff, a total 19 statements were put together to assess their level of knowledge and competence in cancer screening and early diagnosis (9 statements), communication (3 statements), survivorship (3 statements) and 4 statements on personal development, staff resilience and coping strategies.

Similar to PNs and HCAs, a greater proportion of Administrative & Non-Clinical staff agreed that they were aware of cancer risk factors, what cancer is and how cancer is treated.

Slightly over half of the Administrative & Non-Clinical staff surveyed were aware of coping strategies in dealing with personal and work-related pressures whilst the same proportion either disagreed or were unsure of their knowledge and competence in:

- Cancer epidemiology,
- Support services available,
- Signposting patients and coping strategies,
- Therapies for cancer patients, and
- Communicating effectively with a person affected by cancer and issues surrounding their illness.

Table 7: Knowledge and awareness of Administrative & Non-Clinical staff

	I Agree	I Disagree	I am unsure
I understand the epidemiology of cancer	26.2%	23.5%	**50.3%**
I feel confident listening to and talking with a person affected by cancer about issues surrounding their cancer, their anxieties, their treatment and their care,	**40.9%**	21.5%	**37.6%**
I feel confident providing or sourcing information about cancer care in a range of formats, including written and verbal, as appropriate to the circumstances and the situation.	**30.2%**	24.8%	**45.0%**
I know about support services - within and outside the NHS that cancer patients can be signposted to e.g. social prescribing.	**46.3%**	17.5%	**36.2%**
I know some coping strategies and therapies information that can be useful to cancer patients in coping with their symptoms.	**32.9%**	29.5%	**37.6%**

4.2.1 Would an online cancer education portal be useful?

A major aspect of the survey was to explore whether an online cancer education portal would be useful for signposting the workforce to all cancer education materials in C&M. Data obtained revealed that almost all (98%) of GPs and ANPs; 58% of PNs and HCAs and 76% of non-clinical staff indicated that this would be useful.

Participants were further requested to provide suggestions and ideas on what the online cancer education portal should contain. GPs and ANPS stated that the portal should include:

- Local cancer referral pathways;
- Immunotherapy;
- Cancer symptoms and symptoms solver;
- NICE guidelines;
- Local statistics etc.

Some others added that the portal should be presentable, contain bite-sized information, easy to navigate and up to date.

For PNs and HCAs, they suggested that the portal should contain:

- Information on local needs;
- Prostate, breast and cervical cancer care;
- Resources for HCAs;
- Face to face cancer education information;
- Algorithms for two-week wait rule;
- Side effects of medication and treatments; and
- Dealing with bad news.

Overall, they would like any learning on the portal to be module-based, easy to find, easy to understand, easy to remember and to contain quick references and useful contact numbers.

Administrative & Non-Clinical staff signified that they would be interested in:

- Helpful resources for patients (information on financial and mental wellbeing, general support for carers);
- Information on available clinics and the types of care provided;
- Signposting information for patients;
- Coping strategies for patients;
- Communicating with cancer patients and their families;
- Patients' cancer journey right from diagnosis to survival.

They also added that the one-stop central portal for all cancer-related information should be developed to include mandatory training programmes which are CPD accredited, simple to use, written in plain English language, clear and concise and should allow for advice and questions that any one might have**.**

4.2 Findings of one to one interviews

Six (6) interviews were conducted over three (3) months (March-May 2020). On completion of interviews, information obtained were transcribed and analysed to identify common themes. The codes, categories mapped to the themes for each of the interview questions are presented in this report. The interview guide and questions were developed to fulfil the key objectives of the project.

Figure 9: Interview participants

Role
GPFV Transformation Programme Manager
Clinical Oncologist
GP Trainer
Workforce Transformation Lead
Practice Nurse Champion
Primary Care Academy Lead

4.2.1 Current state of primary care cancer education programme in C&M

Cancer education in C&M is currently delivered in an adhoc fashion, generally lacking adequate coordination, as general practices or individuals tend to access cancer education via various methods. The main approach to delivery of cancer education training and courses at general practices is privately arranged educational events (face to face sessions or via an online education provider) or in conjunction with other practices, while some staff undertake certified cancer courses or degree level programmes.

"Adhoc, there's no continuous programme, ***it's all adhoc at the minute****" (3)*

"It's a bit adhoc so there's no sort of one programme – GP practices can do what they like so they've all got different types of mandatory training, some actually have face to face sessions that they provide for their staff, some actually have all online, so there is a discrepancy across the board really ***so there's no kind of one norm"*** *(1)*

"Most practices of 7 or 8 years ago sign up with ***… academy because they are the only ones that have developed these for primary care****. It was a bit clunky, the system but it did give you, you could give all your staff access to it and then they had to complete all their training online, so it's much easier, it's much more cost effective than trying to do it all face to face"(5)*

For some primary care staff, this adhoc provision of cancer education has led to dependence on GP update courses from BMJ, RCGP, Red Whale, Macmillan Cancer Support, RCN etc. Red Whale updates are generally well received and used by GPs because of the style the provider uses to present information i.e. succinct snap shots, bite-sized and relevant points are presented. Nonetheless, access and coverage of the updates are limited. Some GPs access cancer updates on BMJ which they find useful for their appraisal whilst some individuals choose to specialise and might go on to higher education to obtain diplomas e.g. end of life care.

"That's why Macmillan engaged Red Whale and got them to deliver specific cancer areas so it covers a variety of cancers and up to date stuff and again that ***isn't a regular thing,*** *it's usually the Macmillan GPs that apply for grants and they run a course in an area at a specific time,* ***it's not a reproducible thing****, it's a one-off sort of thing" (3)*

And specifically for the cancer support worker cancer education programme recently delivered in the region:

"To be honest Macmillan was probably the only go to place for cancer education regionally but what Macmillan offered was probably ***not frequent enough*** *and the other problem with Macmillan was the fact that* ***we needed to tailor what education we were offering*** *because it was a very specific role" (4)*

Some practices, especially in East Cheshire have over the years relied on privately sourced online educational platforms, not specifically for cancer education, but in other specialties because the platforms offer benefits such as monitoring of uptake and allowed GPs in the area to access the same education and learning materials.

"A company, I think, they came over from the States, they came on board I think about 6 or 7 years ago, they came into the UK market and ***they developed certain e-learning platform and so we use them across the whole of East Cheshire****… The idea was not to educate everybody* ***but to make sure that almost all the GPs were at least at the same level in terms of knowledge and education, and that worked well****… then we could monitor to see who had and who hadn't completed it as well so that was very good"(5)*

There was a certain expression about challenges that were faced in the past regarding how best to coordinate cancer education programmes for primary care which would cover the whole of Cheshire and Merseyside.

"Yes I think the nearest we managed, ***we recognised some of the challenges of coordinating all of these*** *few years ago and the challenge I think has been in identifying which organisation leads this. Is it Clatterbridge as the tertiary cancer centre? Is it the Cancer Alliance? And historically, those two organisations haven't necessarily had the head room or prioritisation to do education, so we set up a cancer*

education group with LHP about 5 years ago… The steering group put together a series of workshops and one of those involved working with Liverpool GPs to deliver some GP education… but that was only focused around central Liverpool in terms of their reach ***so as far as I'm aware there isn't a place to go in terms of getting Cheshire and Merseyside geography"*** *(2)*

Overall, there is neither a specific system nor centralised coordination of cancer education programme for primary care staff in C&M.

"So really at the end of the day, there's nothing, ***there's no real set programme*** *that we can follow through" (3)*

"I think the problem is that it's not centralised so there is ***no "real one" place, there is no "one go to" place*** *for cancer education" (4)*

The sub-themes pulled together on the current state of cancer education for primary care staff in C&M are presented below:

Table 8: Codes and subthemes on current state of primary care cancer education (pcce) in C&M

Question	Codes	Categories	Sub-themes
Current state of PCCE in C&M	Adhoc, irregular, uncoordinated, discrepancy, no real one place to go to, not centralised, people don't know where to go to, no continuity, one-off programmes, past challenges,	-Pattern of delivery -Different methods or approach -Lack of coordination -Non-recurrent funding/ irregular CE programmes -Central point of access	-Lack of a coordinated system for a structured and formalised learning programme (curriculum/ syllabus) -Inconsistent delivery of CE -Unavailability of recurrent funding- for adequate planning, organisation and equitable delivery of CE programme relevant to C&M -Lack of information on available education

4.2.2 The main issues with primary care staff undertaking cancer education across C&M

The main barriers to accessing primary care cancer education in C&M were explored extensively and all participants interviewed alluded to the general lack of time and the work pressures that general practices are faced with, which makes it difficult to release staff or take time out to attend courses.

"The biggest challenge with general practice nurses I think, the nurses will say this to you themselves, ***it's being released from practices to*** *do the training" (5)*

"The barriers are ***being released to go*** *to any thing" (1)*

"The ***bigger issue in primary care is time****. It's getting doctors out there to go to the education sessions because we're all under a lot of pressure" (3)*

"I think it's at all those levels, I'm aware that ***primary care like other health care workers are stretched to find time and to find the right platform for education*** *so when events are put on, it's difficult for GPs to get to them and maybe face to face meetings are not always the right way to do it"(2)*

"Nobody to backfill the practice nurse and so the biggest problem we had was getting the practice nurses released on to the course because it was taking them out of surgery for a whole day. That was the biggest problem that we had. Even though the money was a nice added extra, ***it wasn't really about the money, it was about releasing staff for education****"(4)*

There were efforts to encourage GPs and practice nurses' participation in educational events through incentives for them to take extra time out of their jobs, dedicated protected learning time (PLT) with lunch offers, paying locums to cover. Recently, in addition to workload pressure, there has been a lack of funding to backfill especially for nurses to attend courses. This has made it even more challenging for employers to allow their staff to attend courses.

.."and also there's been a lack of uncertainty about how they can bid for funding to do education courses because they can't get any practice/ GPs to commit to pay"(5)

"In the early days, Macmillan back-filled and in those days there was a lot of money but nowadays they say lack of funding as GPs are reluctant to release their nurses out because they know that work still needs to be done …and that's more of a factor that's affected some of the attendances ***I think – it's the lack of the backfill*** *– it's not that the nurses don't want to, they want to learn, it's their employers.."(3)*

In addition to time and work pressure issues, there are competing clinical specialities, such that when PLTs are organised, cancer education is rarely prioritised. It was however not clear why this is so with cancer education.

"For the practice nurses out in the PCN as they are now, they were very highly qualified and skilled within their roles in the management of chronic conditions ***but actually had no idea about cancer at all*** *and often the other trainings came before that and so when they have their learning events, their PLT, it was always asthma, COPD, cancer* ***always came to the bottom of the list*** *and because of that, they didn't engage with their patients at all at any level about cancer* ***because it was well out of their skill mix****"(4)*

Furthermore, one of the participants highlighted that C&M primary, secondary and tertiary care operate as siloed services and this does not allow networking and funding opportunities to be explored for adequate workforce training and development.

"What I'm not clear is that they understand the audience goes beyond secondary/ tertiary care and should involve primary care. I think each organisation has at some point looked at different audiences and often primary care sits outside of that so it's bit of a blind spot really. So there's a need I guess to agree on that central portal – who hosts it, who manages it and then I ***think there's an awful lot of work to be done to liaise with all those other bodies to enable them to be aware and to work with us*** *to deliver that sort of programme- that includes the network, includes primary care, includes universities" (2)*

One of the participants interviewed expressed briefly an interesting view that cancer education may not be pursued by staff who might not particularly have an interest or supported in practice to undertake cancer education when compared to other specialties and areas of practice.

"I do think cancer has got a role to play in there as well because I think it's something that they should certainly have an overview of but I can't think of how they would access any training around cancer unless they go to some sort of conference or they do something individually ***but unless they've got a specialist interest in it and a reason to do it in practice****, I don't think it's something that they would go and source" (5)*

"I think a lot of it is just making sense of what cancer is,… they think cancer is diagnosed by a GP then they the patient will go off to a hospital and have their treatment… they don't think about the fact that the people that come to their COPD clinic- you know, may have a lung cancer" (6)

Table 9: Codes and subthemes on barriers linked accessing primary care cancer education in C&M

Question	Codes	Categories	Sub-themes
Barriers/ issues linked to accessing PCCE in C&M	Work pressure, Time pressure, Incentives, Funding, Competing specialties, cancer not prioritised, Siloed specialist services, Backfill roles/ locums, Releasing staff	-Time to attend sessions -Other specialities that are also important -Networking and funding opportunities	-Primary care time, work and system pressures -Competing priorities/ specialities -Lack of funding to appoint locums/ backfill -Focusing more on face to face sessions -Ineffective liaising / networking opportunities for more robust approach to CE

4.2.3 Addressing the issues with primary care cancer education in C&M

Availability of online learning was emphasised as being beneficial in addressing the issue of lack of time for primary care staff to undertake required training because of the flexibility it offers. GPs can decide where, when and the pace at which they take their courses.

*"**Online learning is taking a big step forward** because we can do it in our own time, at home and not have to travel, not have to pay and something about online course you can dip in and out which some doctors like to do so that's another way of learning that we're having to adapt to because of the busyness in our role at the moment" (3)*

*"**You have to do everything long-term and it does need to be flexible** – flexible around accommodating people that might not be able to be released" (1)*

Participants stressed the need for a single point of access to cancer educational materials, as this could become a popular portal for any primary care staff to access cancer education or information in the region.

*"**Centralising that single point of access- that's probably the most important thing** that somebody would say I could do a bit more with finding out about and going straight in to that one place where there is everything and they can find it at the appropriate level for them and they can access it" (4)*

Other relevant approaches that were suggested to address the time and work pressures that are major barriers to primary care staff undertaking training were: (i) self-directed learning tools, which can enable professional development, appraisal and revalidation (ii) learning through experience, (iii) organising case studies and (iv) peer to peer support. It was emphasised that it is important to explore a number of ways that GPs can learn in their busy working environment.

*"So **there's exploring other ways** obviously how can GPs learn and educate themselves in a busy working environment" (3)*

"They do like to have multidisciplinary learning events across practices which is a good idea so I think if they go to so some sort of like shorter online modules, you know, I think it would be great to have the opportunity to go out and do face to face 1 hour lunch time learning events which would be focused on multidisciplinary teams in primary care not just on GPs but would be appropriate for anybody that came along whether that be paramedics, nurses, you know to give an overview and give an update" (5)

Some expressed the need to have a much more joined-up approach such that the use of existing educational platforms could also be maximised rather than developing new educational materials from scratch.

*"But then I think some of these just reflect some of the historical erm kind of walls we have between primary care, secondary care, tertiary care where organisations to some degree are working in isolation that's more of the problem because there's lots of educational opportunities already out there through Red Whale, through Macmillan, through local hospitals delivering education**, it's really things not being joined up that is the problem**" (2)*

It was also clear from interviews that there is currently no programme of education for non-clinical staff in primary care, it was indicated this should be included in the cancer education programme.

"To help support them with conflict management and all those types of things and signposting… so lots of reception staff had signposting training as well, so it's something that may be incorporated in the cancer programme" (1)

"I think that having everything in one place is really useful because there's nothing. With what I'm doing now, I'm trying to find some kind of online education from looking at everywhere that I can look at really but it's a bit of this and a bit of that which is quite difficult to pull it together" (6)

Table 10: Codes and themes on addressing barriers linked to accessing primary care cancer education in C&M

Question	**Codes**	**Categories**	**Sub-themes**
Addressing barriers/ issues linked to accessing PCCE in C&M	Online learning, Self-directed learning, Peer support, Newsletters, Bite-sized information, Planning	-Explore other useful approaches -Long term planning	-Explore other approaches that will offer flexibility and enable Primary Care to undertake CE despite the busy schedule and pressures -Take advantage of networking opportunities -Develop a structured plan (long term plan) -Single point of access

4.2.4 The need for primary care cancer education in the area

The need for a much better coordinated cancer education was clearly established and this was based firstly, on current cancer data and performance metrics.

*"I do, yes because one, it's a big issue, right still partly because our performance in this country isn't brilliant compared to our Scandinavian colleagues… I think what people are missing is the fact that our cancer population, **70% of them will have other co-morbidities** and that's usually another chronic longstanding condition so whilst in primary care we are very good at treating the hypertensive, the diabetic, the COPD, **cancer never comes into that equation**"(4)*

*"Our commissioner, she previously worked in an area and had done some work there so I think she knew there was an issue and xxx is quite a deprived area so things like lung cancer, bowel cancer, breast cancer, all the cancers really their rate for **screening is below national average for all of them**, so I think they identified that there was a real need there for education" (6)*

Secondly, it was emphasised that primary care remains the main management / care centre for cancer patients as they only go to hospitals for treatments, however, before, in between and after treatments, they are largely looked after by primary care staff. This establishes the reason why GPs and practice nurses need to understand the symptoms; long-term effects of their treatment and generally to be confident in providing adequate support to cancer patients.

*"They go to the hospitals for their clinical appointments and treatments but in between time they'll come back to us. W**e are still the default position** and if they come to the GP and they can't understand some of the symptoms and the **GP doesn't know, we'll be stuck.** So they might have some symptoms which their GP may not be aware that it's a long term effect of the treatment for example or what to expect, so patients will ask us the questions and I'm pretty sure some of the more cancer centric GPs might be able to at least signpost or maybe answer but the bulk of our GPs may not be that well educated to know that and so they might end up referring back or not sure of what to do" (3)*

*"I think **any education for primary care is welcomed**, they need as much as they can get because they've got such a wide diversity of patients that they see, no one person can be up to date on everything, you know it is important to have other avenues to get themselves up to date" (1)*

*"So yeah I think **if we have better education, better knowledge, better idea** then **we're better equipped** for our patients"(3)*

Thirdly, the increasing need for cancer education now, in comparison to 5 or 10 years ago, was linked to people generally living longer (i.e. ageing population), in addition to the introduction of new treatment modalities and innovations in cancer care and management. All of these would influence how patients are cared for, primary care would require a bit more support in gaining, and adopting new/ up to date clinical skills and knowledge required in providing adequate care and support for cancer patients.

*"Yeah because people are **living longer and you know they are getting more and more- immunotherapy** for example and genomics which is coming in so all these new treatments are going out and they're making big steps we as GPs need to keep up to date with that"(3)*

"Cancer is part of the most leading in terms of innovation and new ideas and new approaches, to solutions and sometimes that impact on how patients might need to be cared for in community and primary care when they do come out of care and it's how do we ensure that this is considered and supported in primary care where they are sometimes perhaps more prone to doing what they know, what they're used to, resistance to change and doing things differently and I'm speaking from experience" (5)

One of the participants mentioned that all of these have created a sense of anxiety on how to manage cancer patients signifying the need for a system that would take ownership, lead on a central programme of cancer education, and support primary care in developing the confidence and competence they need in caring for cancer patients.

"We've got a lot of evidence now showing ***that with cancer specialists, there's a lot of anxiety about how to manage cancer patients****. There's quite a lot of fear out there* ***so I think the system is asking for support, education and training****.* ***What we've lacked is the leadership to provide*** *that so I think we're pushing on an open door in offering the concept of a* ***central portal, central organisation or central body*** *to have a responsibility"(2)*

Table 11: Codes and themes on the need for better primary care cancer education in C&M

Question	Codes	Categories	Sub-themes
Is there a need for better PCCE / a primary care cancer education portal in C&M?	Cancer performance metrics, Primary care as default cancer care centre, People living longer, New cancer treatments, Understanding symptoms, GPs not sure what to do, Anxiety in managing cancer patients, Cancer co-morbidities	-Prioritise cancer education the way other long term conditions are -Primary care to be adequately supported -System demanding it -Central portal, central body, central organisation	-Better education needed for better knowledge so that primary care can be better equipped to provide better care to cancer patients -System demanding for a well-coordinated and organised approach because of the metrics, better survival, wide diversity of patients, the first port of call for cancer patients in between treatments and post treatments - Better management/ treatments which primary care needs to be educated on - Centrally coordinated programme of education -Effective leadership to support primary care- address anxieties

4.2.5 Thoughts on the implementation of a primary care cancer education portal

The feasibility of providing an online cancer education portal in C&M was explored and all participants agreed that it was possible and that it would be a worthy investment for primary care workforce. This is because currently, cancer education information and resources can be accessed from a range of sources implying the need for a "single accredited source" that all primary care staff in the region can be referred to access cancer education materials or training.

"I think and I would agree, it needs that and that would be welcomed in primary care because the ***problem is sometimes it's just so messy, there is no single place to go****, I think that would work very well"(5)*

"I think ***some forms of centralisation is what we really need*** *–I think that's what we haven't really got, there's a lot about, it's all over the place and people don't quite know where to go to access it" (4)*

Another reason was that it would provide an option for staff who are not being released to attend educational events.

*“If we did have a standard programme that you wanted to show, then obviously alluded that an **online choice is probably a good choice** if you wanted to get your numbers up, not everybody is going to be released to go to a session”(1)*

Also, an online cancer education platform would be a great opportunity for CCC to promote and brand itself similarly to the cancer education programme at The Christie’s NHS Foundation Trust in Manchester and The Royal Marsden NHS Foundation Trust NHS Trust, London.

*“I’ve always felt that Clatterbridge doesn’t promote itself as well as it ought to and regionally, I’ve seen how Manchester has done that and I’ve always thought we ought to be doing it and perhaps moving over to the new building and linking in with Liverpool is the **ideal opportunity to actually get an education hub** there which could be accessed by anybody, yeah, **I think it is needed**” (4)*

It was suggested that that the portal should be developed in such a way that staff would be able to choose how they’ll learn and take control of their own learning.

*“We could have a portal **and give them choice and so they can pick which suits their lifestyle better** and help them to learn. There’s a drawback of mixture of choices- they don’t get to start, that can be a drawback. It might be worth that if you have a portal, **it explains the purpose of the portal** and therefore they might say well-that’s my sort of lifestyle and I’m going down that route or they might say, no, I do like to go to meetings and I’ll book on that course”* (3)

*“**I think people like the choice**, what people very much prefer, doing guided studies themselves, taking online courses, and there’ll be others that’ll prefer face to face education so if there’s an option for either, then that’s good as long as things are done in an accessible place, you know that you are not going to always meet everybody’s needs” (6)*

Furthermore, it was mentioned that the portal should provide clear information on its purpose and should target specific primary care staff group i.e. GPs, nurses, receptionists. There were also recommendations that the portal should include dedicated sections for the newly introduced primary care workforce e.g. physician associates, clinical assistants and pharmacists to access relevant cancer information too. These would help them to work together with other primary care staff in providing the right kind of care and support to cancer patients. Challenges linked to developing such a portal were also stated.

*“You could **target specific health care professionals** – doctors, nurses, receptionists, whatever, and we’re now getting other people now, we’ve got advanced care practitioners, we’ve got physicians associates, we’ve got clinical assistants and pharmacists, they do a lot of their own primary care – how we make sure each of these areas are suitable for them and they are signposted on the right path and also not to, try to- it’s hard to balance this and not overwhelm as well but they can see that and say I like that way of teaching, I like that way of learning and can go. It isn’t easy because it’s such a wide spectrum” (3).*

Table 12: Codes and themes on implementation of primary care cancer education portal

Question	Codes	Categories	Sub-themes
Thoughts on the implementation of a primary care cancer education portal	Centralisation, Flexibility, Choice linked to lifestyle, Target, Online, Support available, Needed hub,	-Mixed choices -Online/ web-based -Categorised for professionals and patients information	-Useful for a standardised programme of education that can be accessed online -Targeted approach for different groups of professionals (knowledge and skills expected at different levels) -Personalised approach (i.e. participant choosing to learn at their own pace) -Deliver post cancer diagnosis treatment and cancer patient support courses -Take advantage of The CCC move to Liverpool to develop a cancer education hub

4.2.6 Ensuring sustainability a primary care cancer education portal

All participants strongly highlighted the need for sufficient funding to ensure sustainability of a proposed cancer education portal.

*"**The bottom line is always money**, we do know that. Where the CCGs have funded learning programmes, they've been more successful but when funding is pulled, it falls flat on its face and part of that is funding not just the actual educational materials but the **adoption** of it, the **administration** of it and somebody is keeping it up to date and **without that framework, I think it's difficult to sustain**" (3)*

"Where we can either secure future funding that's recurrent or it has to be based somewhere where there is already recurrent funding" (5)

Some others added the need for a management structure, a dedicated team and a stakeholder group similar to GP training programmes at the deanery.

*"But we need some sort of **robust consistency** in some of the funding and structures like **administrators and educators and people like yourself –someone who has an eye on the whole overview of the programme** and making sure it continues its work, without that I think it will be difficult to sustain. I say that because I've run education programmes, they've been really popular and then, they disappeared. It's the same for, sad to say, Macmillan as well, for example our toolkit was dead popular, funding then stopped, then it's gone flat"(3)*

*"But I think behind the portal, **it's the actual organisation that's more important** to me because we could already signpost GPs to a whole array of education on cancer now, what we don't want is to add another link on top of the numerous links they have. We need, I think, just to help them understand that **there's a central coordinating function** and a group who are specifically looking at the needs of*

and developing what I guess might be some sort of annual programme of events that everyone is aware of on top of what is already out there. For me ***it's that governance structure****, that's more important than a portal" (2)*

"I think it means to ***invest in a team****, it's not going to run itself,* ***you will have to have a small team that will run it"*** *(4)*

The practicalities of maintaining and keeping the online cancer education portal relevant to the people accessing it was emphasised:

"Yes, it's good*, I think making it easy to access, keeping it up to date and lots of other things…. I think it has to be relevant and it has to be updated, they're the most important things I think, you know if you have like a programme of say an online programme, there's no point of it being the same in 5 years' time because things would have moved on so it* ***needs to be refreshed regularly*** *and for the* ***staff to see what the value is to them and to their patients****" (1)*

"So it's not just something that you can just put on and leave for 12 months and get somebody to come in and review, ***they would constantly need updating and managin****g. They keep changing all the time really,* ***so there's a constant need for new information for people"*** *(6)*

"I think it's just having ***something that people can access quite easily and can dip in and out*** *of it I think is more important, isn't it? I know people like being committed to them but when they know that they can dip in their toe and they'll like it if they can go back for more, that's fine" (6)*

An important suggestion was the need to form and maintain partnerships with relevant national organisations and local networks that could advice and promote the cancer education portal.

"The best way to communicate out to primary care and primary care networks about education is through NHS England, the CCGs, and the training hubs as well" (5)

"I suppose it's everybody that has anything to do with cancer, isn't it?" (6)

In addition to these, availability of a long-term plan was advised if the cancer education portal would consistently support cancer education for GPs.

Table 13: Codes and themes on ensuring sustainability of cancer education portal

Question	Codes	Categories	Sub-themes
Ensuring sustainability of PCCE/ cancer education portal	Money, Investment, Adoption, Structures, Administrators, Team, Organisation, Governance, Annual Planning, Easy access, Simple information, Partners, Relevance, Refreshed,	-Finance -Planning and organisation -Partnership -Administration and sustainable structure/ framework -Central coordination and set up -CPD element	-Recurrent funding -Stakeholders / effective partnership in place right from start -Robust planning and central coordination (competency-based approach, learning pathways) -Governance, delivery and management structures in place -Setup/ web design -Value added for professionals and patients i.e. certification

	Accreditation, CPD, Knowledge and assurance for patients, Mandatory training		for CPD -Investment in effective leadership and a team to run the programme

4.2.7 Relevant cancer topics that should be developed and uploaded on the primary care cancer education portal

Cancer courses that would be relevant to primary care staff were explored and the following were suggested:

"Lots of patients obviously look at breast screening website and breast cancer care- that type of thing- so I think it's having that information readily available- ***simple information*** *not necessarily about treatment regimens and all that kind of stuff but simple things like this is how chemotherapy works per se"(1)*

*"****All the questions that patient ask*** *when they've been diagnosed really, …they often kind of have a list themselves and they don't necessarily ask the professionals in the hospital because they see them as being too busy and need to look after everybody so sometimes they do say some of those questions when they come back to primary care and ask their trusted nurses" (1)*

"…It will be an ***underpinning of cancer in varying knowledge*** *so how cancer develops and we can go back to the basics with that, treatments, cancer treatment and again we'll do the full radiotherapy, chemotherapy, immunotherapies, so that's the sort of cancer practical things that we do.* ***Communication skills are so important… And then processes and pathways particularly for the practice nurses****, it's sort of taking them on that journey and again we could do this online which could be quite nice but it's taking the patient- taking that journey through from when the patient has a symptom or concern, how they're feeling but actually what happens in the process, what happens when they go to the GP and sort of a good experience and a bad experience so that they can see the difference" (4)*

All participants indicated that they would be willing to promote and contribute to the provision of educational resources and also support programmes for the portal.

Table 14: Suggestions on cancer topics to be uploaded on primary care cancer education portal

Question	Codes	Categories	Sub-themes
Cancer topics to be developed and uploaded on the cancer education portal			-Palliative care- symptoms control -Early diagnosis- vague symptoms -Late effects of treatment -Red flag symptoms -Patients' needs (Holistic Needs Assessment) -Chemotherapy -New treatments -Side effect of treatments -Cancer patients questions -Communication skills -Processes and pathways -Patient journey

4.2.8 Areas in the country that seem to have a well-coordinated cancer education for primary care

Participants cited a few areas and examples within the country with well-developed cancer education models, which could be considered in Cheshire and Merseyside. These are The Christie NHS Foundation Trust (The Christie Education Centre) that developed Gateway C and The Royal Marsden NHS Foundation Trust (The Royal Marsden School). Locally, the end of life partnership programme in Cheshire and across CCGs in C&M and also, Liverpool CCG was cited as proactively seeking funding for education but overall across the region, there is an existing gap in the provision of cancer education that needs to be filled. It was advised that in developing the model that could be implemented in C&M, this should involve a collaboration between primary and secondary care.

*"Locally, I think more recently we've had the **leadership provided by Macmillan GPs in Liverpool where they have been proactively seeking out sponsorship** from other organisations and Macmillan included, CRUK have been involved, the family doctors association has been involved and they have actually proactively sought out the funding and the education" (3)*

*"I think we got partway there with the LHP cancer group, that group though was limited erm because of changes within LHP. It wasn't necessarily linked in as strongly as it might be and at that time… was Liverpool centric so I think we have a model of how you do this and it's a stakeholder group who sit presumably within the governance of CCC which itself links to the alliance and I guess the key to that is **having the right stakeholders on that steering group to be able to speak for primary and secondary care in** terms of educational needs"(2)*

The End of Life Partnership was cited:

*"Cheshire has an **end of life partnership,** they have rolled out some education there consistently and I've helped them and then again the Macmillan GPs there are instrumental because they have an end of life partnership GP as far as I'm aware- non- Macmillan and Macmillan GP lead, so it's that leadership. In another area, it can be hit and miss- I don't think anywhere near consistency. There are pockets of good areas for education but I've never seen it sustained, that sort of thing, long enough" (3)*

The Christie's:

*"The Christie's doing great work in terms of their cancer education. **There's gateway C but there's Christie educational school**- and I think it kind of reflects that whatever strategy you develop, **I don't think you can limit this to primary care because you're missing a huge chunk of health professionals** and many I guess a large number of cancer patients are concentrated in district general hospitals. **I don't think we can ignore secondary care if we are going to develop a region wide approach to cancer education" (2)**.*

***"Manchester and the Marsden** would be the 2 that I would look at to see how they fund their education departments. I know Manchester has invested a lot in this gateway c but it's HEE who actually fund that but their team has been up and running for a while so how have they funded the rest? **so I would look at what their models are**" (4)*

4.4 Findings of patients one to one interviews

In developing the strategy, evidence on the need for a more standardised approach to delivery of cancer education for primary care staff was also gathered from four (4) adult cancer survivors or who have relatives that have had cancers across C&M. One to one telephone interviews were conducted with the participants in June and July 2020. Interviews lasted for 40-60 minutes and were tape-recorded. The interviews were conducted to explore participants' views on the various aspects of care and support, which they have received, or currently receiving from primary care, which could be improved on. The interviews explored the following:

- Participants' views on the involvement and level of support received from the primary care team.
- Areas or kinds of support that primary care should provide more of to cancer patients at each level of the primary care pathway: health seeking; patient presentation; clinical assessment and diagnostic tests; follow-up, referral from primary to secondary care and post op / rehabilitation
- Participants' thoughts and views about the provision of a centrally coordinated cancer education programme across Cheshire and Merseyside which would enable primary care team to provide better support to patients with suspected or diagnosed cancer.

Information obtained was transcribed and analysed to identify recurring themes.

Figure 10: Themes mapped out from patients' one to one interviews

4.4.1 Patients' views of primary care support received

General expression of satisfaction

Generally, participants expressed that the main aspects of care and support which they received during their cancer journey and which enabled them to stay positive were:

- The support and empathy from their GPs;
- Support from their immediate families (spouses, children) and relatives;

- Referral to support groups and clear communication with the professionals (i.e. less jargons and taking time to explain the clinical terms to them).

There was a general expression of satisfaction and remarkable experience with the level of support received in primary care:

"Yeah it was easy for me to be positive – 1, ***because I had a good response from the GP*** *and 2, because I had a good support from home but if I was alone yeah, it would be more difficult so this is where perhaps a referral to a support group might be handy or a course from a community group for those types of people might be important. So, yeah doctors…. I think that they probably are more sympathetic now and more empathetic now than they were maybe 20 years ago. Some things are moving forward so it is useful that there is a point to contact either a specialist nurse or a consultant or maybe the practice nurse to say: "if you have any concerns don't hesitate to phone me, I'll try and guide you through your little problem" (R3)*

My primary care support following that was really good, I had a nurse come round to remove the second drain, she came and checked my dressing and throughout this time, my GP Dr Xx had got in touch with me, to say that he wanted to see me and to make sure that I was ok... I went to see him and he was so supportive and really lovely, really worried about my family and how they were coping as well as how I was coping and during all of these time, they must have put me on some sort of priority list… and to be honest I couldn't have had any more support than I got from the GP surgery although it was the other- secondary care that was leading all of my treatment so ***that support in the background was really really good, really good*** *" (R1)*

"So he took nothing for granted, examined me, couldn't find anything amiss at all, because he really couldn't diagnose the reason, he decided I should be examined by a specialist so he arranged immediately a fast track referral to the specialist and I saw that specialist within NICE Guidelines of 14 days… couldn't have been handled better so there was an immediate reaction by the GP … and when the report went back to the GP, he acted on that report right away so again as regards my personal experience in my GP surgery, ***10 out of 10*** *" (R3)*

Whilst primary care was generally seen as being highly supportive, there were some differing views based on experiences of some other people:

"Some guys have gone on to the GP and they haven't necessarily been given the fuller examination as necessary…so they haven't had the thorough examination and really investigation that I was given" (R3)

4.4.2 Aspects of support that primary care could provide more of to cancer patients at each level of the primary care pathway

The various aspects of care received in primary care were carefully investigated and the aspects of the pathway that participants felt that primary care could improve on are presented below:

Delay in cancer diagnosis and referral for investigation

One of the main concerns gathered was the **general delay in cancer diagnosis**, especially for rare cancers and in cases where GPs have not considered patients 'and relatives' complaints and concerns about the symptoms presented. In some cases, it was clear that GPs struggled with balancing the risks of subjecting to patients to "over-diagnosis" especially when required tests are not completely accurate.

"First of all it's really really difficult for primary care and I feel very sorry for them, my experience, can we just go back to the Walton centre – a tertiary centre and the very rare condition like 1 in a 1000 or 1 in 10,000 or something, ***they would always say I wished the GP knew more about this*** *" (R2)*

"What happened was I attended my GP for nearly 2 years making complaints about a problem I had with the chest – a rattle which I couldn't get rid of and he'd put it down to just phlegm and left it at that and it wasn't one time I went back and insisted what's going on and he told me to go for an x-ray and what happened with that x-ray was that it came back and said that I had a shadow on my lung but

he said at that time, he put that down as an ageing process so we just dismissed that and 3 months later, I coughed up a copious amount of blood and I took myself down to A&E" (R4)

Lack of trust in patients' and relatives' judgements

It was clear that delays in diagnosis could **be because of lack of trust in patients' judgement and hunches**. One of the participants relayed a conversation between someone he met at a cancer support group who went to see his GP for check-up and possibly for PSA tests following a cancer prevention TV show that he watched. The GP refused at first but the patient insisted:

Another patient who had gone to see his GP following a cancer prevention show by a celebrity on the TV was asked: "have you got any symptoms, are you getting up in the night?"

Patient: No, I feel ok.

GP: Do you really want a test?

After a lot of argument, the doctor conceded and said ok," I'll give you a PSA test then".
*He didn't really want to, but the guy's PSA was over 200 (ng/ml)…. He was referred to a hospital right away, within about 48 hours he was on chemo because it was so aggressive never minding the 62- day waiting period for treatment…**so not all doctors listen to their patients and that is a tragedy** (R3)*

For some participants, their concerns (or relatives' concerns) were initially dismissed but on further investigations, were referred to specialists. This implied a general lack of GP's trust in patients' judgement.

*"So when I went back to my GP, I told him about it, **he wasn't very happy that someone was sort of talking over him** because he said it was nothing. Anyway, they sent me to the eye hospital and they said I need to go back to the dermatologist" (R4).*

*"I don't know whether primary care might feel that the relative is being a but pushy or a bit but I say (a) they might have an important role in a very rare condition where the relative is being pushy for their own purposes rather than the patient themselves but **by and large there should be an element of trust** (R2)*

*"She said to me 'I wish I could get hold of my GP….. because I knew there was something wrong with my child…I knew my child but you know they wouldn't do anything …as it could have been done **so a lot of trust is required I think as well in people who report symptoms"** (R2).*

GPs concerns about tests' inaccuracies

Also, with respect to prompt cancer diagnosis by GPs, there were some views that reflected that GPs were usually concerned about inaccuracies of some tests and were reluctant to refer patients to take such tests in order to prevent over-diagnosing and over-treating them and because of this, some serious cases have been missed.

*"So a PSA in its own right is an incomplete picture **but there are doctors who are reluctant to carry it out because they're not 100% accurate but what tests are 100% accurate**…. there's risk of over treatment in conditions and risks of not treating a condition because of misreading or so. In my own personal experience, good experience of a patient, not so good of other patients- either doctors haven't listened or they've gone with symptoms and been given a treatment that really was not for that condition. They've been treated for something else and after going back half a dozen times eventually the cancer is diagnosed but it's 6 months further developed" (R3)*

Regular cancer reviews and impact on patients' wellbeing

For some patients that have been diagnosed with stage 1 or 2 cancers and have required treatment but needed to be reviewed regularly, there is usually a big trade-off between being reviewed regularly in order to provide early treatment in case of any recurrence or metastasis and dealing with patients' anxieties. Whilst some patients find it reassuring to be reviewed regularly, some have done it for years and have lived with the anxiety that they might be called back.

*"He came to see me once a year, he said "I'll come back in 3 weeks' time" and he came 3 weeks' time, he was really anxious, and he said, 'they've given me all clear, it's not growing again' and he said, "**I did this for 10 years you know**" and then they discharged him after 10 years and what that man went through and obviously there's this small chance it might have grown but it didn't and so that man had that anxiety all that time (R2)*

Clear communication [Limiting the use of clinical terminologies, (sense) checking and showing empathy]

Communication is another theme that came out clearly from the participants interviewed. It was expressed that primary care professionals would need to be more skilful in the way they conveyed clinical information to patients especially as it takes a while for some patients to come to terms with their condition and to also understand all that would be required for their treatment. It would be important that any information passed on to patients are free of clinical terminologies, simple and with sense-checking approaches used to clarify that the right information have been shared.

***"It's been able to process what the professionals are telling you** and making sure that the professionals use everyday language and not use lots of clinical terms because they usually give you some handouts of sort as well and the clinical terms are in the handouts so you've got time to get your head round those later with the initial consultations you really need it in very plain easy to understand language"(R1)*

*"Barriers to communication and cancer is an older person disease by and large, three quarters (¾) diagnosed aged 65 and over and if you go to the age 80, **90% of 80 years have got a hearing impairment, a third of 80 year olds have got some forms of memory loss** and so communication becomes much more key"(R2)*

*"**What I would like is called sense checking when communicating**, you might inadvertently use jargons but even if you're not, you still want that person to understand- it is very important and so to say ' do you understand what I mean?', 'would you to repeat it back to me?' and not just 'have you got any questions' or 'is that alright' but just double checking, particularly, the more important it is that one should be checking, it's not just the case of 'come and see me in a months' time" (R2)*

Emotional support for patients, most especially vulnerable patients

Whilst some participants highlighted commendable follow-up that they received from primary care during and after their cancer treatment, there was an indication that a better follow-up and support structure should be provided for cancer patients especially for those who might not have the support of families or relatives. In most cases, patients are not aware of available support groups or benefits that could be accessed/ claimed, this information can be provided in primary care. There was a suggestion that primary care led cancer support groups could also be developed and aimed at signposting patients to available help and care.

*"My GP's part here is, you know the first stop is with the GP, it starts with the GP, you go there, tell them what's happening and he'll refer you. I've had no support other than that, the next time I go along to the GP, they don't mention your cancer, what you've had, there's no more support than that other than the hospital send them a letter which they send back to me, **there's never a word**" (R4)*

One of the main areas of support that should be provided is psychological and emotional support for patients.

"I think the psychological support is, health needs assessment I think is really important, unfortunately I think the local version is very much a negative- "are you worried about this?", "are you worried about that?" (R2)

*"Apart from so many limited information, most of the needs are never taken into consideration… no one asking you about how you feel about the surgery, how does your family feel about it? you know, it's all kind of shallow, you leave and you're ready to get on…**For me, for someone to sit down and tell you what this journey is going to be about** and what you're going to go through, and on top of that*

emotional support, a contact number, someone who you could talk to, you have questions to ask, you know everything is hurried, you go along and there's no time for nothing really" (R4)

"On average, so just general awareness and ***some of the best people I know that are promoting and advocating for cancer now are people who are health professionals who've had cancer themselves*** *and all those who would want to say don't wait till you get cancer yourself to be empathetic" (R2)*

It was also highlighted that there could be a direct contact link for patients to clarify doubts and for general guidance regarding their treatment- possibly primary care led support hubs.

"Yeah, I think emotional support for the patient and their family and also I think from them, there's a need for that patient centred need approach, tailored to the patients' needs and I think that'll give patients the better experience of what they're going through and we need to be sure that people living with and beyond are all supported and their needs are met" (R4)

"So if there can be schemes from a cancer tumour point of view, if that could be directed by primary care either support groups or courses *run by the community for that particular tumour site – lung, breast or prostate whatever, that would be useful as well so that's another outlet where probably an extension to primary care support for the patient, isn't it?" (R3)*

4.4.3 Need for primary care cancer education

The importance of providing a more accessible and standardised approach to primary care cancer education in C&M was explored from the participants. This was investigated in order to gain patients' perspectives on areas in which they felt primary care staff could benefit from more education and training, enabling them to provide more consistent, high quality care and support to cancer patients. Participants highlighted why they think it is important for primary care staff to acquire up to date training in cancer care management. They also suggested the main aspects of care that they felt that primary care staff could benefit from additional, targeted training.

To keep up to date with new treatments

"It's educating the GPs to understand a little more – I know that they're expected to know something about everything but I was a bit shocked to hear that during the doctor's training, the time spent on prostate cancer which is what I have been involved in – I think they've probably got 2 or 3 days training only on that subject and of course legislation and new treatments and things are evolving all the time, ***I'm sure GPs get bombarded with literature everyday with new rules and regulations for cardiac problems, strokes, diabetes, for breast cancer etc., it must be a mine field trying to keep up to date with everything that they need to know*** *but in order to properly lighten their burden… So what we've had to do over the years, we've had oncologists we've had all sorts of folks come giving talks to our support group but they've gone away learning as much from us than we had from them and I think that's brilliant – that really is working in partnership with others." (R3)*

"Yes, I think it's a great idea, it's a superb idea really, diagnosis of cancer and treatment is devastating to patients and families I'm sure you're aware but trying to provide better follow-up care… The problem with many people is living with cancer as a long term condition and the long term side effects of the cancer – lymphedema, lots, many problems and they can all have the emotional side to them, don't they and I think that's the bit that patients are left to deal with themselves and maybe we need a therapy course for patients or something, not everyone wants to go to support groups but I think maybe we need to, I don't know but need something more than what's happening now" (R4)

" I think there's a role for online training and maybe for things like the ***new immunosuppressant, immunotherapy****, understanding a bit more about them and when patients are saying will this apply to me so you've got a kind of basic knowledge but* ***I think just to go back to the psychological side of things as well****" (R2)*

*"I think, I must say particularly with radiotherapy, I think there's- I'm not going to say ignorance****, I think there's a need to understand radiotherapy more*** *and getting much smarter and more directed, less side effects and so on but I think just general awareness about radiotherapy is lacking (R2)*

Multidisciplinary approach to cancer education

It was also highlighted that a multidisciplinary training approach could be employed within primary care because of the opportunity it would afford all staff in having the same level of knowledge and awareness with respect to the provision of cancer care and support. It would also lead to shared knowledge amongst the professional groups.

"I think a lot of the training could be more multidisciplinary, maybe, I mean, I'm guessing that separating different groups out to provide the training because some of it would obviously would still need to be at different levels than others, more in-depth for some people than for other people but I do think that training must be multidisciplinary" (R1)

The need for more cancer specialist nurses

There was an interesting view that there is a need for more cancer specialist nurses in primary care.

"I think we need more specialist nurses" (R4)

4.5 Summary of all findings

Surveys were sent out in two phases between October 2019 and February 2020 to GPs, ANPs, PN's, HCA's and Administrative & Non-Clinical staff Staff in Primary Care across C&M to around 380 general practices. Collectively, we received 477 responses. These responses were collated and for each user group a separate summary report of the findings was compiled. The combined findings of the three (3) surveys i.e. GPs & ANPs; PNs & HCAs; Administrative & Non-Clinical staff are shown below in Figure 11.

Figure 11: Summary of the three survey findings

On average - respondents spend between 1-4 hours learning about cancer	***82% of respondents prefer face-to-face learning followed by Online Learning 59%***	***The majority of respondents find out about cancer education via CCG Communication Bulletins followed by looking online***
Importance of cancer education scale 1-10(Least-Extremely): ***80% of respondents indicated the scale of***	***The online resources relevant and accessed by the different Survey User Groups were:*** ***Macmillan***	***77% of respondents are in support of an online portal***

importance higher than a 5	*and CRUK*

Each of the user groups had the opportunity to suggest their ideas for content within the cancer education online portal and its accessibility. Figure 12 illustrates a combined word cloud listed for each user group.

Figure 12: Word cloud of participants' suggestions on the content of the cancer education online portal

Key messages from the one to one interviews conducted with six (6) key professional

- One to one telephone interviews were conducted with six (6) professionals involved in the coordination and delivery of cancer educational programmes in the region.
- Information gathered from the participants pointed to the current adhoc and inadequate coordination of cancer education programme in the region.
- As cancer education competes with other clinical specialities, it has over the years not been prioritised. With organised face-to-face cancer educational events, some staff were not released to attend courses because of workload pressures.

- The provision of an online cancer education portal was agreed as a worthy investment as it would enable the provision of a web-based single point of access.
- This platform would require sufficient and recurrent funding, a management structure, dedicated team and a stakeholder group to support a consistent provision of accessible cancer education to all primary care staff in the region.
- Some of the cancer topics that participants mentioned to be included in the portal were palliative care, vague symptoms management, patients' holistic needs assessment, new treatments and side effects, communication skills and patient journey etc.

Key messages from the one to one interviews conducted with four (4) adult cancer survivors and those with relatives that had cancers

- Participants expressed the remarkable experience that they had from primary care during their cancer journey.
- It was also revealed that primary care workforce could improve on their support for cancer patients by promptly referring patients to specialists for further investigations and diagnosis.
- This might require GPs trusting in patients' judgements and concerns and also taking into consideration patients' anxieties when they present at surgeries and also when they are being reviewed.
- In supporting cancer patients, participants stated the need for simple, clear and empathic communication.
- There were indications that primary care could do a lot more on the provision of emotional and psychological support to patients especially vulnerable patients who might not have support of families or relatives.
- There was a suggestion that primary care-led support groups could also be rolled out to further support and signpost patients to relevant services.
- All participants interviewed agreed that primary care staff would benefit from a more standardised primary care cancer education so that they can keep up to date with new cancer treatments; provide psychological support to patients; enable multidisciplinary training for the workforce and to allow for more cancer specialists in primary care in the region.

5. Discussion: Evidence for implementation of cancer education portal for C&M primary care workforce

5.1 Need for primary care cancer education

With the recent progress in early detection and treatment of many types of cancer and about half of people diagnosed with cancer predicted to survive for an average of 10 years or more, cancer survivors report poorer health and wellbeing than the general population. There is an increasing awareness of the need to put in more efforts to improve the quality of life of people who have had cancer as some of them will experience recurring problems that would negatively affect their quality of life. In addition, previous research reports have indicated that GPs are in favour of primary care having a greater responsibility in cancer care including follow-up, diagnosis and management of physical and psychological effects of cancer and treatment[30].

In developing this strategy, the need for cancer education for primary care staff and the relevance of cancer education to the group were explored in the surveys and one to one interviews undertaken. With a scale of 1 to 10 (where 1 was least importance and 10 extreme importance) to assess the level of importance of cancer education to primary care professionals, a greater proportion of the participants indicated a scale of importance that was higher than 5: 88% for GPs and ANPs; 80% for PNs and HCAs, and 71% for Administrative & Non-Clinical staff. One to one interviews with key professionals that provide education/ cancer education for primary care clearly emphasised the need for cancer education. The first reason was based on the lack of any form of coordinated programme or method of accessing cancer education in the region. In addition to this, lots of effort and time are required when trying to identify suitable education. Secondly, cancer performance metrics for C&M are worse than national average. Thirdly, primary care remains the first port of call for cancer presentation for many patients with suspected or diagnosed cancer and those who require screening or advice about prevention; and finally, the introduction of new cancer treatment modalities. All of above point to the need for a central programme of cancer education for the primary care workforce and especially in C&M.

5.2 Gaps in cancer education

As mentioned in the previous section, primary care is expected to take its part in coordinating and facilitating overall cancer care to patients, which comprise general medical care, follow up requirements, side effects of

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[30] Linden et al., 2016. Managing the consequences of cancer in primary care

treatments, management of comorbid conditions, pain management, practical, social and psychosocial support for patients and their families and health promotion. This makes them responsible for the provision of complex and holistic care to cancer patients. Yet, there are concerns regarding primary care's expertise on all of these aspects. A number of studies[31, 32] have pointed out that an important facilitator to accessing effective care from primary care is further training and education in cancer prevention, screening, diagnosis and follow up.

In the GP surveys undertaken as part of this strategy development, an investigation of cancer education gaps where GPs and ANPs had low knowledge and confidence (levels less than 6) was undertaken and the findings presented in chapter 4. The following were indicated as areas where more education is required:

- Cancer pathways (e.g. optimal pathway for lower GI),
- Personalised care,
- Long-term side effects of cancer treatment,
- Prehab/ rehab, young people, and
- Cancer and immunotherapies.

For PNs and HCAs, there was a higher proportion of participants that responded that they were unsure of their knowledge or confidence in:

- The provision of health promotion information and support,
- Provision of cancer specific support when patients are being reviewed,
- Eliciting concerns about a cancer diagnosis,
- Treatment, prognosis and the dying process,
- Undertaking holistic needs assessment,
- Support people to self-manage their cancer symptoms and
- Supporting other professionals as patients' transition through acute, home care, survival and end of life care.

For Administrative & Non-Clinical staff, slightly over half of the participants either disagreed or were unsure of their knowledge of:

- Cancer epidemiology,
- Available cancer support services,
- Signposting patients and
- Coping strategies and therapies for cancer patients and
- Communicating effectively with a person affected by cancer and issues surrounding their illness.

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[31] Wind et al. 2013. Follow-up after colon cancer treatment in the Netherlands; a survey of patients, GPs, and colorectal surgeons. Eur J Sur Oncol J Eur Soc Surg Oncol Brit Assoc Surg Oncol. 2013;39(8):837.

[32] Brennan et al. 2011. Follow up after breast cancer: views of Australian women. Aust Fam Physician. 2011;40(5):311–6.

A systematic review by Meiklejohn et al., 2016[33] highlighted that GPs generally lacked the relevant training and knowledge about cancer, side effects and the follow up requirements.

This is clear evidence that primary care staff in C&M would welcome cancer educational resources and programmes that focus on these particular areas of cancer education in the first instance after which other relevant aspects of education required can be developed and delivered to the workforce.

5.3 Barriers to primary care cancer education

Despite the increasing need for support for cancer patients and survivors, there are a number of barriers to accessing relevant cancer education by this workforce.

In the PNs and HCAs surveys conducted for this strategy report, the major barriers to undertaking cancer education were:

- Time constraints,
- Inability to access any education by not being released by their employer to attend education or training,
- Unavailability or lack of awareness of available courses to attend.

One to one interview findings were also similar to these as work and system pressures were highlighted as major barriers such that even where they had cover or backfill, because of the workload pressures, staff were still unable to undertake any training. Other barriers identified were competing priorities and poor networking and liaising with other tiers of health care system delivery. Many of these barriers could be linked to the mode of delivery i.e. face-to-face cancer education sessions, which require people to attend. It points to the need for this strategy development in redefining how cancer education is delivered. The role of primary care and involvement in the management of symptoms and side effects of cancer, its treatment, monitoring and diagnosis of cancer recurrence, mentioned above are important and effective in patients' care. Other roles that primary care could provide and improve on include complex, holistic and long term follow up cancer care, providing practical, social and psycho-social support. These reflect the varied needs of cancer patients and establish the level of support that primary care would be able to improve on if all barriers limiting their access to adequate cancer education are addressed[34].

5.4 Preferred cancer education delivery method and resources

Over the past few years, a changing trend in educational background has been experienced, with a shift from expert led teaching, process-focussed curricula linked to information overload to a more user-led learning. Addressing the barriers to undertaking professional training and education of primary care staff calls for an

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[33] Meiklejohn et al. 2016. The role of the GP in follow-up cancer care: A systematic literature review.

[34] Emery et al. 2014. The role of primary care in early detection and follow-up of cancer. Nat Rev Clin Oncol.

exploration of a range of learning methods and procedures and delivery approaches that will support this workforce in meeting the multifaceted needs of their patients and, take into the consideration the pressures that they face.

From the three surveys conducted in this study, face-to-face methods, the use of online interactive modules and reading educational materials were preferred modes of learning by the participants. On further exploration through one to one interviews, availability of online learning was stressed as being beneficial especially in addressing the issue of lack of time for primary care staff to undertake required training because of the flexibility it offers. Participants also advised that other approaches such as case studies, peer-to-peer support and self-directed learning opportunities could be explored to address the time and work pressures that are major barriers to primary care staff undertaking training.

There are several proponents of e-learning[35] who have stressed the huge benefits that are linked to it either as electronic only or in blended forms. Some of the benefits include time and location flexibility and accessibility, lower training costs, self- directed and self-paced, standardised course delivery and workforce training monitoring. Whilst there are huge benefits linked to e-learning, it is also important to not assume that every member of staff would benefit from e-learning but to ensure that e-learning is balanced with other relevant modes of education e.g. face to face learning and dissemination of cancer education newsletters and magazines that can be read. It is also important that the benefits of e-learning should not be taken for granted but should be regularly evaluated to identify if necessary skills and competence are being delivered, applied and adopted in practice.

In the surveys and one to one interviews conducted, the feasibility of providing an online cancer education portal for primary care staff in the region was explored. The online cancer education portal for C& M will be designed as a central education platform accessible to all primary care professionals and will provide cancer and educational resources (e.g. summarised referral guidelines, local cancer pathway, links to existing cancer education portals). It would display relevant information on local cancer support services and useful contacts; and for advertisement and communication of planned face to face cancer educational events within and outside the region and also as a platform for cancer specialists to write-ups, blogs, virtual conferences and webinars.

In the surveys conducted, almost all of GPs and ANPs indicated their agreement with the implementation of an online cancer education portal; 1 in 2 of PNs and HCAs and 76% of Administrative & Non-Clinical staff were interested in this provision. Whilst most GPs (98%) indicated their interest, responses from PNs and HCAs and Administrative & Non-Clinical staff suggested that a blended approach to learning should be considered. Nonetheless, there is a clear indication for an online cancer education portal for the primary care workforce. The cancer education portal should therefore be developed in such a way that the educational needs of most, if

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[35] Ruggeri et al. 2013. A Global Model for Effective Use and Evaluation of e-Learning in Health

not all, the workforce are met. It should support the various modes of learning identified in the region- provide online access to cancer educational resources; support and advertise available face to face cancer education events and sessions within and outside the region, and should make available relevant local cancer information and available support services.

The survey requested information from participants on how the cancer education portal should be designed and many stated that they would like the portal to:

- Be presentable,
- Contain bite-sized information,
- Be easy to navigate, and
- Up to date

Some participants mentioned that they would be interested in:

- A module-based learning platform,
- Easy to find information
- Easy to understand information, and
- Easy to remember information.

Administrative & Non-Clinical staff signified that the one-stop central portal for all cancer-related information should be developed to include

- Mandatory training programmes which are accredited for continuing professional development (CPD),
- Simple to use information and written in plain English language,
- Clear and concise information, and
- Advice and answers to questions that anyone might have.

In meeting this need for primary care workforce in C&M, it is important to consider the findings of the systematic review of Regmi and Jones (2020)[36]. Their evidence suggests that the design aspects of any e-learning platform should be considered in creating or promoting user-led learning, which should also be tailored to the need of the user. In addition to these, appropriate development and consideration of institutional strategies such as flexibility and access, learning styles, costs, and integration, interaction to promote learners' knowledge and understanding of evidence-based national drivers and local contexts, which all centre upon learners' learning experience as the main driver, rather than the technology itself, in practice should be vital. These would all need to be considered when putting together a centralised, accessible online cancer education portal for the primary care workforce in C&M.

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[36] Regmi and Jones, 2020. A systematic review of the factors – enablers and barriers – affecting e-learning in health sciences education

5.5 Sustainability of an online primary care cancer education portal

Based on the survey findings which pointed to a keen interest in the development of an online cancer education portal for primary care staff across C&M, this was explored in the one to one interviews with key professionals involved in the coordination of cancer education programmes in the region. The factors that would enable a sustainable and widely adopted cancer education portal in the region were assessed and participants strongly highlighted the need for:

- Sufficient funding,
- An organised long-term plan,
- Oversight, management and governance structure,
- A dedicated team, and
- A stakeholder group and partnership with relevant educational bodies and networks such as Health Education England, Higher Institutions, Primary Care Networks, Liverpool Health Partners etc.

The need for all of the above was also acknowledged in the Bandong et al. 2019 [37] study in which it was mentioned that the success achieved in their web-based tool developed in improving the knowledge of health care professionals in whiplash management was based on a rigorous process of development and implementation. There was also an extensive consultation process among stakeholders which informed the web design and implementation. Moreover, the study by Vaysse et al. 2018[38] in the development of their online oncology course outlined their development team which comprised of 2 sub teams: (i) Teaching group that supported the development of educational resources, and (ii) Project management group that comprised a project manager to oversee the project and manage the teaching team; a social officer that managed registration and moderated interaction on the online tool and communications and technical officers. According to their evaluation report, the digital learning tool offered clarity, interactivity and was a useful and cost-effective educational tool for CPD and multidisciplinary education. It is imperative that these facilitators of a successful implementation highlighted above are considered for an effective primary care cancer education programme in C&M.

5.6 Specified cancer education and training

In identifying the cancer topic areas that participants were interested in C&M, suggestions were requested in the questionnaires and were also explored in the one to one interviews. GPs and ANPs stated their educational interests in cancer local referral pathways, immunotherapy, cancer symptoms and symptoms solver, NICE guidelines and local cancer statistics. For PNs and HCAs, they listed their interests in prostate, breast and

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[37] Bandong et al., 2019. An Interactive Website for Whiplash Management (My Whiplash Navigator): Process Evaluation of Design and Implementation

[38] Vaysse et al, 2018. The Impact of a Small Private Online Course as a New Approach to Teaching Oncology: Development and Evaluation

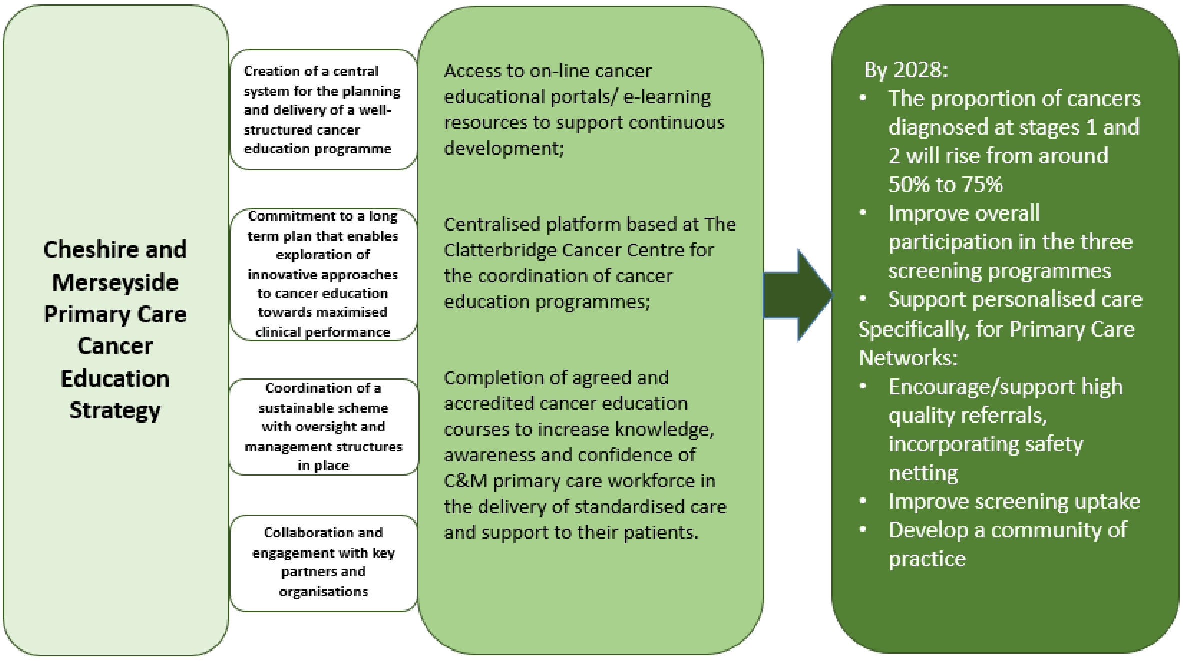
cervical cancer care, resources for HCAs, algorithms for the two-week wait rule, side effects of medication and treatments and dealing with bad news. Administrative & Non-Clinical staff signified that they would be interested in accessing helpful resources for patients (financial and mental wellbeing, general support for carers); information on available clinics and the types of care provided. They also indicated that they would be interested in signposting information for patients, coping strategies for patients, communicating with cancer patients and their families and understanding patients' cancer journey right from diagnosis to survival. This process of idea generation of what to include in the online portal ties in with the approach utilised in the Bandong et al., 2019 study. This process of idea generation supported uptake and acceptability of the digital tool. The specified cancer education needs and gaps identified in C&M should guide the development of a primary care cancer education online platform in the area in order to engage the target group such that they can take control of their learning, gain acceptance of an appropriate approach to delivery and improve equitable access to cancer education in the area.

6. Recommendations

The scoping exercise undertaken towards developing C&M Primary Care Cancer Education Strategy included a review of literature to identify available cancer education platforms nationally; a review of national guidelines to explore the roles and responsibilities of primary care in providing care and support to cancer patients; primary care workforce surveys and one to one interviews. These enabled the investigation of cancer education needs in the region; preferred learning methods; standard cancer educational resources accessed; gaps in knowledge and competence; barriers to accessing cancer education; addressing the barriers, the feasibility of providing an online primary care cancer education portal and how to sustain this portal. In summary, the findings from the evidence gathering exercise showed that there is a need for a more standardised and consistent approach to delivery of cancer education in the region as cancer education is seen as reasonably relevant to primary care professionals.

The major barrier linked to not accessing cancer education is current workload, time and system pressures faced and particularly for nurses, not being released to attend courses because of the pressures. Several methods were identified as preferred learning method- face to face, online learning and reading resources. Time spent learning about cancer varied across the group – for Administrative & Non-Clinical staff , almost half of participants have not had any form of cancer education; most PNs and HCAs generally spent 1-4 hours on learning about cancers; half of GPs spent more time (i.e. greater than 4 hours) on cancer education annually. Standard cancer education resources accessed were those provided by Red Whale, the Royal College of GPs and from Macmillan Cancer Support which includes courses delivered by Macmillan GPs; RCN and Nursing times. Reading materials and generally seeking information online were also included. The provision of an online cancer education portal was widely accepted by GPs and Administrative & Non-Clinical staff, while half of PNs that participated indicated their interest. It was stated by participants that the portal would need to be updated regularly, accessible by all, relevant to local practice and easy to navigate. In addressing the barriers and need for better coordination and delivery in the region, the need for a single point of access to cancer education materials, having a long-term plan and exploration of a number of approaches that would take into consideration the pressures in primary care were identified. For sustainability of a programme of education that works, key factors that were recognised from information obtained from the participants were the need to secure recurrent funding, having a dedicate team for oversight and management of the cancer education programme and robust collaborative working between primary care, secondary and tertiary care; partner organisations, HEI and royal colleges. All of the findings from the reviews, surveys and one to one interviews are being summarised and mapped into 4 main themes which are presented as recommendations and strategies for cancer education for primary care workforce in C&M and are presented in this section. The provision of a centralised, accessible online primary care cancer education portal which serves as a portal to inform, signpost, enable access to existing cancer educational resources and materials and also supports delivery of cancer education in the region is also presented.

Figure 13: Recommendations from Macmillan Primary Care Cancer Education Project, Cheshire and Merseyside



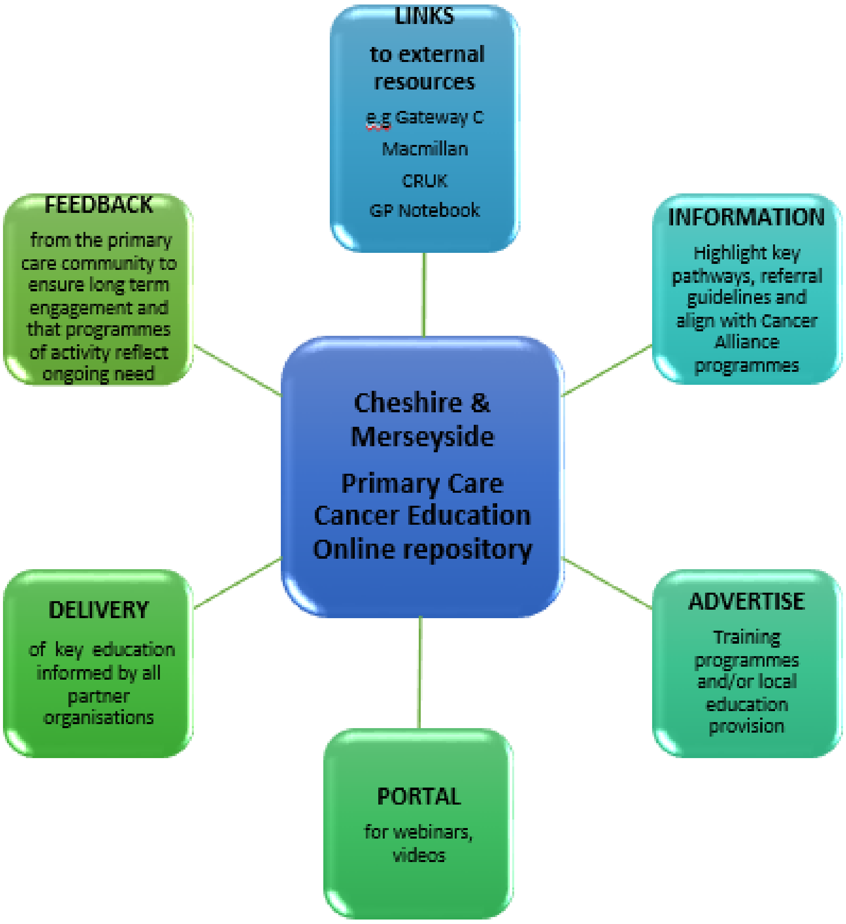
6.1 Creation of a central system for the planning and delivery of a well-structured cancer education programme

According to the survey findings from the various primary care workforce groups, one to one interviews and review of literature, there is now a desperate need for a more structured approach to the delivery of cancer education to primary care in C&M. Moreover, as this strategy report was put together during the global COVID-19 pandemic, which led to information technology becoming the mainstay in health care professionals' everyday practice- from patients' consultation to learning. These, with the current lack of a common "accessible" portal for cancer education in the region and the irregular and adhoc approach to delivery calls for the development of a more sustainable, well planned and organised system that would be accessible to all primary care staff in the region. All of the above become more significant and relevant due to the national drivers supporting improvements in cancer care, which are wholly dependent on the engagement and actions of primary care. In achieving this, the following would need to be considered:

6.1.1 A single point of access for consistent and equitable delivery of learning and dissemination of information on available cancer educational learning nationally or regionally

A recurring theme during the investigation of the need for "an accessible, centralised" cancer education portal in order to improve access to cancer education for primary care workforce in C&M was the provision of a single point of access for cancer education. Participants mentioned the difficulties linked to searching for relevant cancer education from multiple sites when trying to find useful information. It was gathered that the provision of centrally coordinated “accessible” online portal or all cancer related information and educational materials would enable better coordination, standardised delivery and equitable access to cancer education materials. It would also allow for effective communication of relevant information to all primary care staff and support the planning and delivery of suitable cancer educational events in the region. As the preference for an online cancer education portal was high among the participants, this single point of access should be designed as an online platform for accessing cancer educational materials, and as an avenue for organising webinars and uploading video tutorials. Whilst this would be an online provision, findings from the survey especially from practice nurses suggested that in addition to an online mode of learning, there was also a preference for face-to-face sessions. Therefore, in addition to providing an online educational access, the single point of access should be managed by a team that would be involved in identifying relevant peer support educational events; organise some face-to-face meetings annually; and work closely with cancer specialists that could provide one to one support to primary care staff that would be interested in such. Figure 14 shows an outline of the purpose of the online cancer education portal for primary care staff in Cheshire and Merseyside.

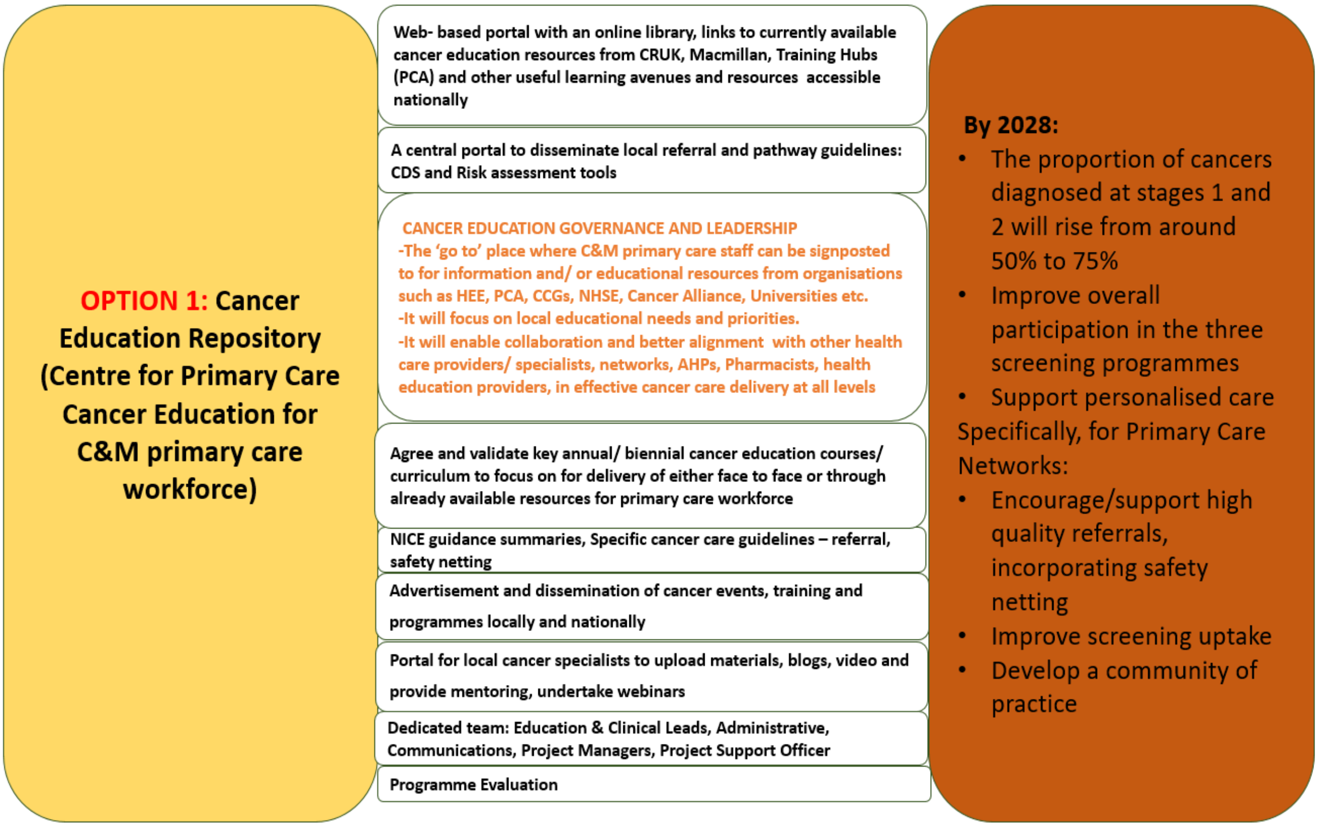
Figure 14: Functions of C&M primary care online cancer education portal



In deciding the model of an online cancer education portal that would provide optimum benefit for primary care staff and improved care for cancer patient, an options appraisal was undertaken and 4 options were considered:

- **Do nothing option (status quo);**
- **Option 3:** Access to general information;
- **Option 2:** (option 3 + access to national and local cancer guidelines);
- **Option 1:** This is the preferred option which is based on evidence gathered from surveys and interviews conducted. The option includes: option 2 above + access to local referral pathways and summarised guidelines + dedicated team to support collaborative and engagement work programmes + support delivery of face-to-face events + evaluation of portal (Figure 15 below).

Figure 15: Online Primary care Cancer Education Portal: Option 1 (Preferred option)



OPTION 1: Cancer Education Repository (Centre for Primary Care Cancer Education for C&M primary care workforce)

Web- based portal with an online library, links to currently available cancer education resources from CRUK, Macmillan, Training Hubs (PCA) and other useful learning avenues and resources accessible nationally

A central portal to disseminate local referral and pathway guidelines: CDS and Risk assessment tools

CANCER EDUCATION GOVERNANCE AND LEADERSHIP
-The 'go to' place where C&M primary care staff can be signposted to for information and/ or educational resources from organisations such as HEE, PCA, CCGs, NHSE, Cancer Alliance, Universities etc.
-It will focus on local educational needs and priorities.
-It will enable collaboration and better alignment with other health care providers/ specialists, networks, AHPs, Pharmacists, health education providers, in effective cancer care delivery at all levels

Agree and validate key annual/ biennial cancer education courses/ curriculum to focus on for delivery of either face to face or through already available resources for primary care workforce

NICE guidance summaries, Specific cancer care guidelines – referral, safety netting

Advertisement and dissemination of cancer events, training and programmes locally and nationally

Portal for local cancer specialists to upload materials, blogs, video and provide mentoring, undertake webinars

Dedicated team: Education & Clinical Leads, Administrative, Communications, Project Managers, Project Support Officer

Programme Evaluation

By 2028:

- The proportion of cancers diagnosed at stages 1 and 2 will rise from around 50% to 75%
- Improve overall participation in the three screening programmes
- Support personalised care

Specifically, for Primary Care Networks:

- Encourage/support high quality referrals, incorporating safety netting
- Improve screening uptake
- Develop a community of practice

6.1.2 Provision of an accredited programme of education with an organised curriculum

There is a need for the development of agreed and validated cancer education curriculum that would support the workforce. This formalised curriculum should be pulled together to focus on areas of needs and gaps identified by the various professionals for their skills, knowledge and competence in supporting cancer patients through their journey. It would help to provide an educational structure to courses that are available and how they can be accessed. The curriculum should be regularly reviewed on consultation with primary care professionals and updated to meet their needs. It should be designed in such a way that it is relevant to their clinical knowledge, capabilities, years of experience in practice and overall professional development. It should also reflect national drivers, key ambitions and planned revisions of cancer pathways.

Findings from the survey identified that the following areas of interest for each group of primary care workforce (Table 15).

Table 15: Gaps in knowledge and competence identified in surveys

Primary Care Workforce	Cancer education training required
GPs and ANPs	• Cancer pathways (e.g. optimal pathway for lower GI), • Personalised care, • Long-term side effects of cancer treatment, • Prehab/ rehab, young people, and • Cancer and immunotherapies.

Primary Care Workforce	Gaps in Knowledge and competence identified in survey	Areas where more education was indicated in survey
PNs and HCAs	• Provision of health promotion information and support • Provision of cancer specific support when patients are being reviewed • Eliciting concerns about a cancer diagnosis, treatment, prognosis and the dying process, • Undertaking holistic needs assessment, support people to self-manage their cancer symptoms • Supporting other professionals as patients’	• Cancer treatments (including side effects) • EOL/Palliative Care • All aspects of cancer education • Staging • Signs & Symptoms (including Checker)

	transition through acute, home care, survival and end of life care - Epidemiology of cancer - Implementing MECC - Knowledge of EOL tools	
Primary Care Workforce	**Gaps in Knowledge and competence identified in survey**	**Areas of interest indicated in survey**
Administrative & Non-Clinical staff	- Epidemiology of cancer, - Implementing MECC, - Knowledge of EOL tools.	- Support available (for patients/families/carers) - Information on every aspect of cancer care - Treatments (Inc. side effects) - How to communicate with those affected by cancer - Signposting - Bowel Cancer

This information (Table 15) and also in Tables 4-7 (in chapter 4) can be used to design an organised programme of education for the various professional groups within primary care workforce and with indicated timescales for completion. Designing a curriculum is a process that requires careful thinking through[39] of what the purpose and intent of the educational programme is; what would be covered; resources available; how the programme would develop over time and an outline of expected outcomes. Once all these are clear, the information can be displayed on the online cancer education portal to serve as guide for staff prior to undertaking or accessing any training resource on the portal.

6.1.3. Development of a cancer education competency framework for primary care professionals

As mentioned above, in addition to curriculum development, once a structured and agreed plan of cancer education development courses has been identified and compiled, this would need to be delivered, and completion of courses should lead to adoption and improvement of clinical skills, confidence and competence in practice. The availability of a central coordinating system of cancer education, with a suitable curriculum of courses, would be beneficial in creating a competency framework that could guide effective monitoring of the

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[39] https://cornerstoneseducation.co.uk/news/how-to-design-your-curriculum/

professional development of the workforce in their care and support for cancer patients. The competency framework required for the primary care workforce would support knowledge and confidence of all members of the workforce (clinical and non-clinical). It would help to ensure access to standardised relevant cancer information and education for the various groups within the workforce. It would be useful in assessing and monitoring levels of development; assist in planning and developing a curriculum of cancer education that is relevant to the group (as discussed in the previous section) and would be beneficial for appraisals and continuous professional development. The competence framework would guide in determining levels (core, specialised or highly specialised levels) of competence and what cancer educational courses or curriculum would be relevant at different levels of expertise and qualifications. It would also help to identify current levels of competence and guide in developing a study plan to attain higher levels of competence, with possible timescales for completion.

The recently developed competency framework for nurses and health care professionals involved in the care of adults living with and beyond cancer by Macmillan Cancer Support could be adapted for primary care workforce across C&M[40].

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[40] https://www.macmillan.org.uk/_images/competency-framework-for-nurses_tcm9-297835.pdf?utm_source=Macmillan%20Cancer%20Support&utm_medium=email&utm_campaign=2682708_Mac%20Update%20June%202020&utm_content=Nurse%20Competency%20Framework%20_button

6.2 Commitment to a long-term plan that enables exploration of innovative approaches to cancer education towards maximised clinical performance

Our assessment of the status of cancer education for the primary care workforce across C&M revealed an irregular and non-standardised pattern of delivery. The major factors responsible for this are the lack of central organisational ownership and recurrent funding that could enable the development of a clear plan for consistent delivery of programmes. For a programme of education that is consistently delivered and accessible to all primary care workforce in the region, an outline of factors that could be considered are presented.

6.2.1 Explore flexible approaches to undertaking cancer education in primary care

Delivering a sustainable cancer education and addressing the needs of primary care professionals requires an organised long-term plan with a clear vision, objectives and step-by-step guide of the various educational programmes that could be delivered; how it would be delivered; who would deliver and how efficiency and effectiveness would be measured. It is important that the plan incorporates a blended method that takes into consideration flexibility to learning which would be of value to the professionals.

6.2.2 Emphasise prioritisation of cancer education in primary care

A major finding of the one to one interviews was that cancer education is not being prioritised in primary care, as there are other more important competing interests. This sometimes makes it impossible for practice nurses and health care assistants to be released to attend courses or to gain adequate support in undertaking relevant training. There is a need for more investigation on why this is the case and what could be done to ensure that cancer education is prioritised in the region. The role of a primary care network (PCN) directed enhanced service (DES) contract and other relevant primary care specifications in bringing a community of practice together should also be explored.

6.2.3 Encourage dedicated opportunities to evaluate and review cancer education programmes delivered to primary care

The development of a workable plan for delivery of cancer education in the region would be incomplete without evaluation. Evaluation plans would create an opportunity to invest in the review of courses, curriculum, competence framework, approach to delivery, uptake and access to education, outcomes achieved, areas for development and other innovative techniques that could be incorporated. All of these parameters would be useful in determining the level of impact of the programme, effectiveness (if possible, cost effectiveness) and how further benefits could be derived from the programme. It would also highlight gaps and areas where effective changes would need to be made.

6.3 Coordination of a sustainable scheme with oversight and management structures in place

Development of a sustainable programme of education requires a strategic approach that considers how resources required for its implementation can be acquired, managed and effectively utilised. These would help in gaining more resources and support for the further development of the programme. Based on the survey and one to one interview findings, factors that could encourage the development of a sustainable primary care cancer education portal that offers relevant cancer education programmes and resources for primary care workforce in C&M include:

6.3.1 Investment in robust oversight, governance and management approaches to cancer education programme delivery

For a centrally coordinated system of primary care cancer education programme that would be a single point of access to cancer educational resources, available courses, assessment of competence or confidence levels and a structured plan for delivery, it is imperative to have a suitable oversight and management process for every aspect of the programme. This oversight will ensure that programme coverage across CCGs is monitored. It would also provide a guarantee that a framework that ensures efficient delivery of equitable and inclusive programme of education exists. In addition, it would guide in assessing how well the cancer education provision meets the needs of primary care workforce in the region. Effective management structures will support the development of objectives, processes and governance structures that would lead to fulfilment of strategic visons, goals and plans to specified time. They would enable identification of resources required- financial, human and technological and seek out how these would result in achievement of specified outcomes for the programme of education.

6.3.2 A dedicated team to deliver planned programmes of education

Fulfilling all of the above in meeting the needs and gaps in cancer education for primary care workforce implies the need for a dedicated team with strong leadership and effective management structures to take responsibility for efficient coordination and smooth running of the central cancer education programme.

6.4 Collaboration and engagement with key partners and organisations

An important aspect of ensuring sustainability for the cancer education programme clearly indicated in the one to one interviews conducted was developing and maintaining collaboration and engagement with key partners that could support the programme. Presented below are some approaches to collaborative working to create awareness, advocate and embed a sustainable cancer education programme for primary care workforce across C&M.

6.4.1 Promote sustainable partnerships between primary, secondary tertiary health care systems to support robust CE plan

This requires developing robust partnerships and engagement plans that go beyond primary care or the CCGs but which also take advantage of supportive contributions that could be provided by secondary and tertiary health care systems. It would also be beneficial to develop working relationships with organisations such as Health Education England, NHS England, Public Health England, National Institute for Health and Care Excellence (NICE) for advice and guidance on achieving outcomes; development of educational resources and guidelines, and to explore opportunities for accessing recurrent educational grants. Interviews conducted revealed that there a number of existing avenues such as the Primary Care Academy and training hubs, the Deanery, Liverpool Health Partners etc. that would be able to support and advice on effective provision of cancer education in the region.

6.4.2. Strengthened partnerships and strong links with strategic clinical leaders who can support programmes of learning

It would also be beneficial to identify, initiate, maintain and regularly review opportunities for developing strong links and partnerships with clinical leaders across all tiers of health care. This could be with Consultants, Clinicians, Lecturers and Specialists who would be willing to volunteer as experts in reviewing educational materials and resources, developing learning programmes and in delivering training. In addition to these, there could be cancer education advocates and champions who would be willing to provide specialist mentoring, provide one to one support and facilitate peer support and cancer review sessions and programmes to primary care staff. This would require effective engagement plans to identify stakeholders and partners that would advocate for, promote, support and contribute to the programme of education and would be committed to transforming cancer education in the region. The PCN cancer DES specifically provides the opportunity to create communities of practice, which will only help to bolster the above.

In order to ensure that the recommendations outlined above are adequately implemented, it is important that specific action plans that would allow for fulfilment of the recommendations are developed. An overview of some action plans drawn from the recommendations above are presented in the next chapter.

7. Strategy implementation and Action Plan

Strategy implementation and execution involves acting on developed strategies and recommendations in order to achieve desired goals. It requires developing the right actions around who, where, when and how the strategy developed would be rolled out. Below is an outline of important considerations for implementing the primary care cancer education in C&M.

I. Identify key audience/ groups/ networks/ partners/ organisations to share with and gain ‘buy-in’ – e.g. primary care networks, Clinical Commissioning Groups, Primary Care Academy, Royal Colleges (RCGPs, RCN etc.), Higher Educational Institutions.
II. Disseminate / communicate strategy to key partners
III. Commit sufficient resources to strategy execution
IV. Build the right team
V. Develop a detailed action plan
VI. Monitoring, governance and control
VII. Progress review

This section provides a step-by-step guide on the specific tasks that would be required for the development of a web-based cancer education portal which informs, signposts, enables access to cancer education resources and also supports the delivery of cancer educational programmes.

7.1 Development plans

Web development	
Action	**How**
Determine organisation's learning budget	-Investigate what was spent in the past on training -Assess current cancer education budget, -Explore funding/ grant opportunities -Obtain cost estimates/ quotes from potential web developers and cancer education planning teams
Consultation with suppliers	-Consult with those who have experience in building interactive health education websites -Identify key requirements for the online portal
Tendering process	-Agree and select a suitable vendor to design website -Review quotes and gain approval from the Trust Internal Governance Processes including from digital board/ IT consultants
Procure	-Explore a range of sample sites that can be developed -Review designs, contents and their development on the site

Agree on content design, features and functionality	-Identify suitable modules -Align to learning outcomes and validate -Gain approval to upload -Review draft of designs
Design website	-Develop webpage -Upload approved contents
Site test	-Run tests -Pilot with a range of professionals -Assess feedback and modify accordingly -Run tests until website is ready to be made live
Make live	-Roll out -Communicate to all professionals -Evaluate uptake and level of access -Provide support

7.2 Curriculum development plans

Competency/ curriculum development	
Action	**How**
Review cancer education competency model	-Search and pull together a list of training/ educational competency frameworks -Identify relevant framework that could be adopted -Consult with local primary care GPs/ practice nurses/ cancer managers/ GP Leads and agree on a framework
Provide an outline of primary care cancer education curriculum	-Following consultation agree on a cancer education competency framework to use
Identify cancer specialists, facilitators, educators to provide cancer education materials	-Communicate and engage with local cancer specialists/ oncologists/ nurse leads etc. - Discuss resources required and which could be provided (summaries, local cancer referral pathways, webinars) -Develop and agree on a plan for presentation of courses
Plan cancer education programme	-Develop an annual cancer education plan that incorporates both face to face and virtual access -Upload agreed cancer education materials and resources -Test links and access to course

Communication	-Promote and advertise cancer education plan -Communicate to the wider audience and particularly to primary care professions
Pilot site	-Enable access to live webpage

7.3 Management plans

Management plans	
Action	**How**
Arrange steering group meetings	-Identify stakeholders -Contact and inform them -Develop central cancer education delivery plans for the region -Communicate plans (objectives, plans, meetings, terms of reference and governance structure) to members
Project documentations	-Prepare and circulate phase 2 project implementation plans to all steering group members -Agree cancer education delivery plans and project milestones
Engagement with primary care workforce	-Develop regular communication and engagement plans with primary care professionals - Identify robust support mechanism to this workforce
Collaboration with relevant partners	-Provide an outline of partners, networks, charities and organisations to link with it -Provide stakeholder mapping -Identify key contacts and engage with them -Develop a plan to maintain and build engagement
Develop primary cancer education plan for the year	-Develop an annual cancer education plan that incorporates both face to face and virtual access -Engage with cancer educational professionals that could take part in delivery of education -Upload agreed cancer education materials and resources -Test links and access to course -Provide monitoring and evaluation plans -Be clear on governance on accountability plans -Undertake detailed project risk assessment
Evaluation	-Have a clear evaluation guideline,

	-Be clear on timescales, benefit and impact indicators to assess
Financial Management	-Monitor budget and spend -Provide regular financial update

7.4 Evaluation Plans

Evaluation plans
Website (Design, Functionality)
Resources/ Courses / uploads on website
Reach/ Access (Number of users)
Uptake and use of resources
Suitability/ acceptance
Relevance to practice
Leadership and Governance
Effectiveness
Further development / improvement required

8. Conclusions

Macmillan Primary Care Cancer Education Project in Cheshire and Merseyside (C&M) was sponsored by Macmillan Cancer Support, a renowned cancer charity that provides specialist health care, information and a range of support including psychological social and financial support to people affected by cancer. The project which commenced in October 2019 was hosted by The Clatterbridge Cancer Centre NHS Foundation Trust, within the Clinical Education Department. The aim of the project was to develop a C&M primary care cancer education strategy which would serve as a framework for how cancer education would support the primary care workforce across C&M in providing high standards of care to patients, right from prevention, to earlier cancer detection, diagnosis and referral, safety netting and in supporting patients living with and beyond cancer. The development of the strategy was carried out as a scoping exercise to gather evidence from the primary care workforce across Cheshire and Merseyside; key professionals involved in the planning and delivery of education in the region. Patients' experiences were also gathered and included in the strategy development. Reviews of national policies and guidelines on primary care workforce training and education and cancer management and currently available cancer education portals were also undertaken. In addition to these, the feasibility of the provision of an online primary care cancer education portal as a centralised and accessible for cancer education resources for primary care professionals in C&M was also explored. This also entailed exploring the costs and options for the implementation of an online cancer education portal hosted at The Clatterbridge Cancer Centre NHS Foundation Trust. Quotes and cost estimates from web developers were obtained and assessed. All evidence gathered for the strategy pointed to the need for:

- **Creation of a central system for the planning and delivery if a well-structured cancer education programme**
- **Commitment to a long term plan that enables exploration of innovative approaches to cancer education towards maximised clinical performance**
- **Coordination of a sustainable scheme with oversight and management structures in place**
- **Collaboration and engagement with key partners and organisations**

The production of this C&M primary care cancer education strategy was during the COVID-19 pandemic when various lockdown restrictions and preventive measures were in place. The restrictions impacted on cancer across all areas to varying degrees. This indicated the likelihood of significant increases in the number of avoidable cancer deaths in England due to delayed diagnosis as a result of the pandemic. In managing this backlog and mitigating the direct and indirect effects of COVID-19 pandemic on cancer patients. Based on this and the evidence gathered from this C&M primary care cancer education strategy development, there is a heightened need for imminent support and skills development for primary care staff in C&M in order to meet required targets and most importantly, provide quality care and support to cancer patients. Implementing the recommendations from this project would help support these ambitions.