Improving early cancer diagnosis – evidence-based interventions for primary care

Part 1 – actionable insights

Edge Health

RM Partners
NW & SW London Cancer Alliance

NHS

Foreword

Finding cancer early is the biggest single win we can make towards reducing the mortality and morbidity of this increasingly common disease[1].

Despite the increase in cancer screening, 94% of cancers are diagnosed through symptomatic presentation. Early diagnosis in symptomatic patients is dependent on several factors: firstly, symptoms presenting when cancer is in its early stage; secondly, people recognising those symptoms and seeking timely assessment (the patient interval); and thirdly, primary care accurately assessing and referring those symptoms (the referral interval).

Each of these factors is underpinned by significant inequalities; for instance; early-stage lung cancer is less likely to exhibit symptoms than early-stage breast cancer. In these cases, screening in high-risk populations continues to be an early diagnosis focus, for example in the targeted lung health check programme. Variation within the patient and referral interval is caused by multiple factors, exhibited by a differential of early diagnosis by borough, by GP practice and by level of deprivation.

RM Partners, the Cancer Alliance serving NWL and SWL, in partnership with Edge Health and GP Clinical Leads and practices, has focused significantly on understanding the causes of these differences, and most importantly how we address them. Most notably over the last year, direct engagement with 46 GP practices across NWL and SWL, coupled with data from the National Cancer Patient Engagement Survey (2022), and other publicly available sources, has created an evidence base and actionable work plan to improve early diagnosis across our fourteen boroughs. Six key actions have been identified for general practice:

- taking active steps to learn about and remove system inequity in primary care;
- understanding their cancer performance from a data and case review perspective;
- implementing quality systems; specifically, decision support and safety netting systems which engender a whole team safety culture;
- workforce stability and low use of locums;
- positive system engagement with PCNs and secondary care;
- accessing cancer-specific training to support the appropriate use of cancer pathways.

The partnership working engendered through PCNs and Place is an important component of success. It was aptly demonstrated by the openness of primary care in sharing their clinical, organisational and experience of the system over the last year and will be critical to making the wins for and with our patients and communities over the year following.

We look forward to working together to save more lives from cancer through early diagnosis and reduced inequity,

Dr Lucy Hollingworth
Deputy Medical Director, RM Partners
NWL ICS Cancer Clinical Director

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Managing Director, RM Partners

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[1] Crosby et al 2020

Contents

Executive summary

This report summarises the findings and next steps of an exploration into the factors associated with urgent cancer referrals in NW and SW London primary care.

Between June and October 2023, 46 GP practices were interviewed on a range of topics focusing on clinician and practice factors affecting the proportion of cancers which are diagnosed via an urgent suspected cancer (USC) referral (formerly 2WW referral). Cancer diagnosis via this route is much more associated with early cancer diagnosis than any other symptomatic diagnostic route. This project also reviewed a range of quantitative data exploring patient and primary care behaviour within the symptomatic pathway, referral volumes and conversion from referral to diagnosis of cancer within this sample.

In order to understand differences in practice, organisation and systems, the detection rate was used to identify practices more and less likely to have patients diagnosed via the urgent suspected cancer route. Detection rate measures the proportion of cancers diagnosed via a USC referral from primary care. The interviewed practices were separated into those with high and low detection rate. For practices within the high detection rate group, at least 55% of cancers were diagnosed via urgent suspect cancer referral (average for all high detection rate practices = 63%). For practices in the low detection rate group, practices had a detection rate of 42% or lower (average of 38%)[1]. The average detection rate nationally is 52%.

The purpose of dividing the sampled practices into two groups was to explore whether consistent themes could be identified between high detection rate practices and low detection rate practices, which could be used to inform recommendations and learnings going forward.

Review of referral and conversion data showed that practices with a high detection rate had higher referral volume and conversion from referral to cancer diagnosis than low detection rate practices. After adjusting for population characteristics, low detection rate practices made 32% fewer referrals than high detection rate practices and 22% fewer referrals than the national average.

Practices in the high detection rate group also had a 34% higher conversion rate[2] from USC referral to diagnosis of cancer. Amongst high detection rate practices the average conversion rate was 5.5%, compared with 4.1% in low detection rate practices. Both high and low detection rate practices are below the national average of 6.8% in this measure. NICE NG12 guidance[3] sets out the risk threshold at which a USC referral should be considered for symptomatic patients. This is based on a positive predictive value (PPV) of symptoms of 3% or higher to prompt an urgent referral.

Based on structured coding, some consistent differences were seen between the interviews of practices in these two groups. Six key, actionable factors where identified; 86% of practices with a high detection rate reported a stable workforce, compared to 61% of low detection rate practices, and significantly lower locum usage. Higher detection rate practices were more likely to describe good access to secondary care diagnostic services: 16 out of 28 compared to just 3 out of 18 low detection rate practices. They were also more likely to display existing awareness of cancer data for their practice, and participate in case review. Decision support tools, and embedded systems of safety netting, which engendered a practice safety culture were significantly more likely to be used in practices with high detection rates.

The role of training was most significant when accompanied with other positive interventions, but as a stand alone intervention has limited value.

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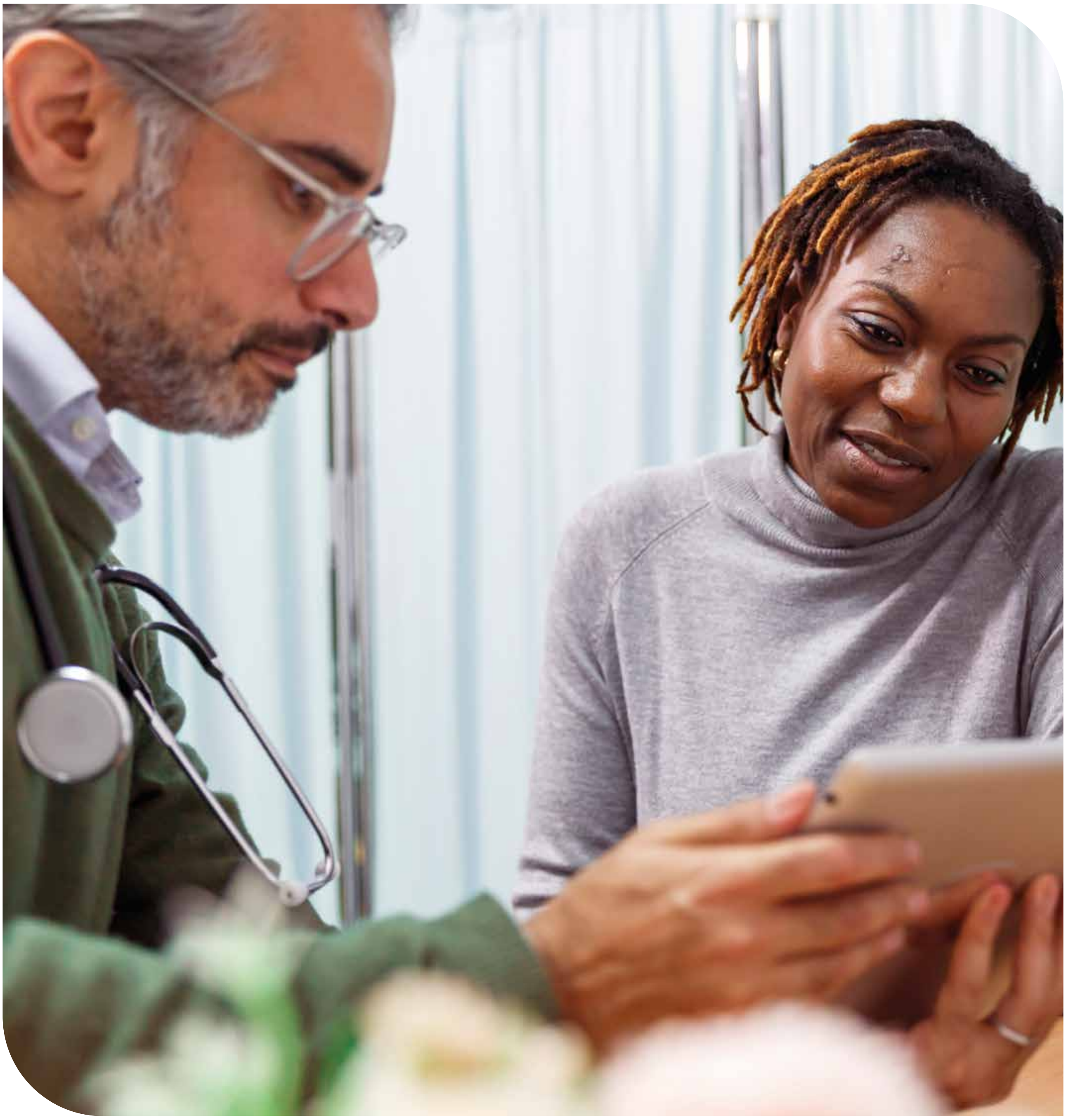
[1] Detection rate is measured as a 5-year average of cancers diagnosed between 2016/17 and 2020/21.
[2] The conversion rate is the proportion of urgent suspected cancer referrals which result in a diagnosis of cancer.
[3] https://www.nice.org.uk/guidance/ng12/chapter/Context

Perspectives on population and inequity factors were similar across practices, irrespective of their detection rate. This points to significant learning and development needs to support primary care in addressing systemic inequity, in much the same way NHS Trusts have been supported.

Early detection of cancer is a product of complex interacting factors, which if addressed will make significant impact.

The interview feedback also suggested substantial benefits to the supportive, data-led conversations which were undertaken as part of this work. The conversations yielded 236 action items and involved 185 members of primary care staff. They provided an opportunity to share data and best practice.

The information gained has allowed us to develop a focused set of interventions to address the variation in early cancer detection across NW and SW London in primary care.



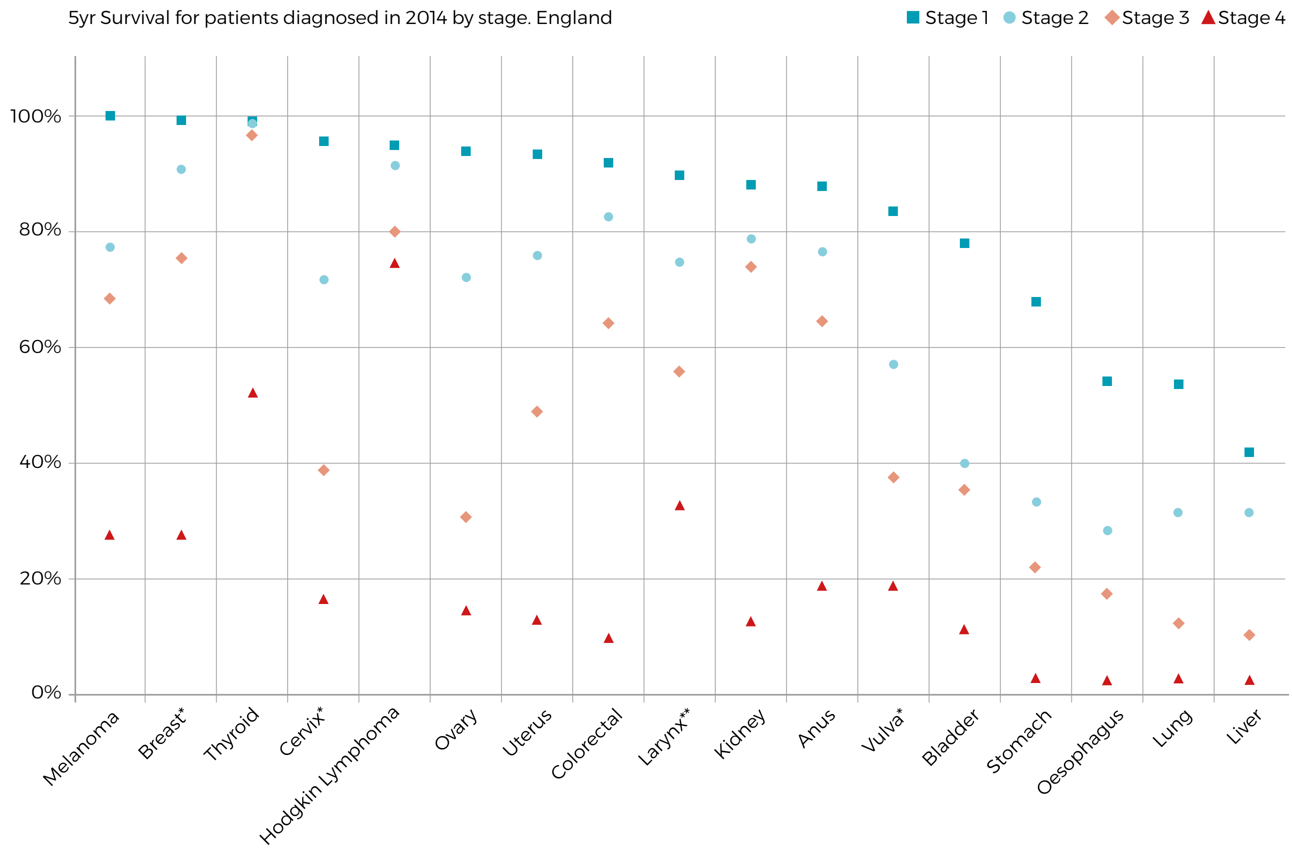
1 About the Cancer Alliance

RM Partners is the cancer clliance covering North West and South West London Integrated Care Systems, serving a total population of 3.8 million people. As one of 21 NHS funded cancer alliances, RM Partners mission is to save more lives from cancer through earlier diagnosis and reduced inequality, in line with the NHS Long Term Plan (2019). RM Partners works with healthcare organisations across both ICSs, including primary care, eight acute Trusts and one specialist Trust. A map of the members and networks covered by RM Partners is included within Appendix 1.

1.1 The case for change

While advances have been made in reducing cancer mortality and morbidity, the survival rate in the UK lags behind much of Europe (Richards et al 2018). An important way to improve survival is through earlier stage of diagnosis, which is a key predictor of long-term patient outcomes – with earlier survival enhancing prognosis and overall outcomes for cancer patients (McPhail et al 2015). In this context, NHS England has set a commitment in the Long Term Plan for 75% of cancers to be diagnosed at Stage 1 or 2 (early diagnosis) by 2028 (NHS 2019). In 2018 and 2019, RM Partners overall early diagnosis rate, as a percentage of staged cancers, was 56%. Across all cancers combined, 5-year survival from cancer diagnosed at Stage 1 is more than 80%, dropping to just over 20% for cancers diagnosed at Stage 4.

Datapoint 1: **Five year survival by stage of diagnosis (England)**



*Females only
**Males only

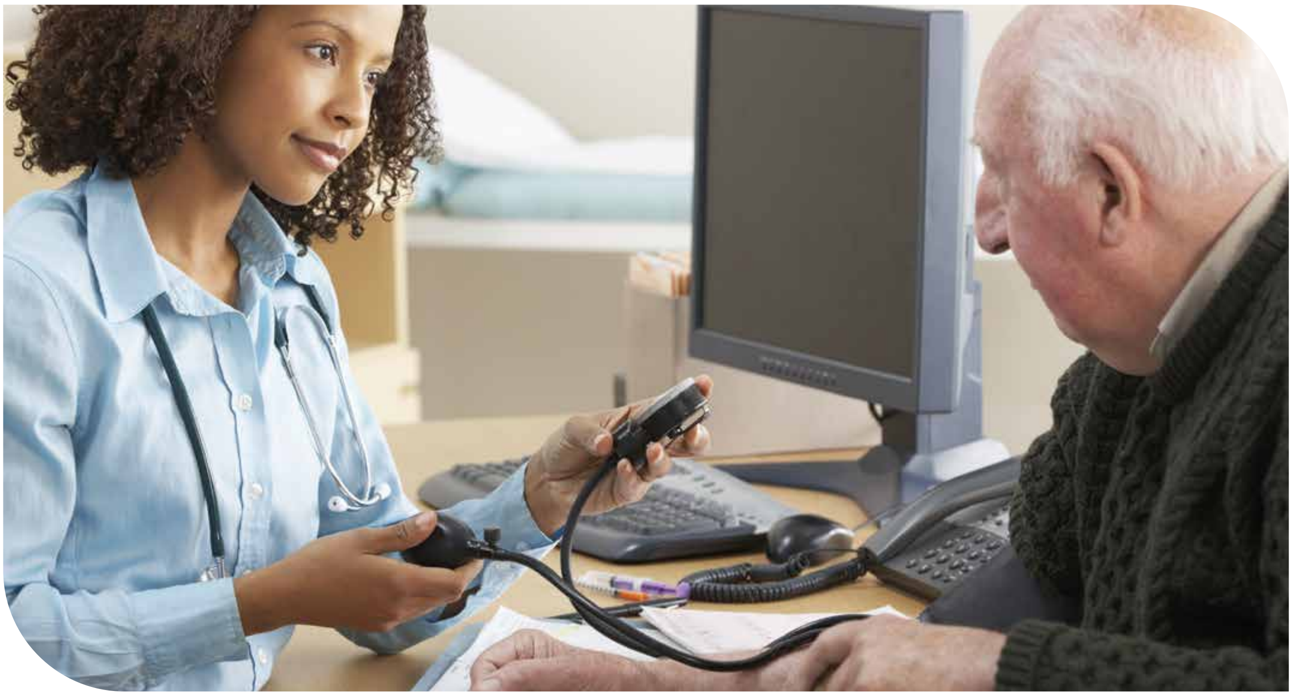
A key route to cancer diagnosis is via symptomatic urgent suspected cancer (USC) referrals from primary care, previously termed 2 week wait (2WW). Symptomatic patients who are diagnosed via USC referral are more likely to be diagnosed at an early stage (Stage 1 or Stage 2) than those diagnosed via other routes. This is shown in Table 1, taken from the CancerData website[4/5].

This data shows that across England **52%** of patients diagnosed after a USC referral were diagnosed at Stage 1 or 2. Whilst this is materially below the rate for screening (85%), it is significantly better than presentations through other referral types, particularly those diagnosed following emergency presentation. **33%** of patients diagnosed via routes other than USC referral or screening were diagnosed at Stages 1 or 2. Although screening is most likely to result in an early cancer diagnosis, it is only available for certain cancers, and responsible for just 6% of diagnoses in 2018.

Table 1: **Route to diagnosis and stage of diagnosis in England (2018)**

	2018 total	Stage 1	Stage 2	Stage 3	Stage 4	Unknown	Stage 1 &2 of total	Stage 1 & 2 of staged
Screening	19,878	61%	25%	8%	2%	5%	85%	90%
Urgent Cancer Referral (TWW)	**127,354**	**30%**	**21%**	**20%**	**19%**	**9%**	**52%**	**57%**
Routine referral	66,753	32%	13%	16%	17%	22%	45%	58%
Emergency presentation	59,183	8%	8%	13%	36%	35%	16%	25%
Other	47,224	27%	12%	14%	19%	28%	39%	54%

As well as route to diagnosis, there are considerable differences in the rates of early diagnosis by borough and by tumour type across NWL and SWL ICSs, as can be seen on the following page.



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[4] Data available here: https://www.cancerdata.nhs.uk/

[5] Due to time lag in accurate staging data becoming available, 2018 data has been used

Table 2: **Stage of diagnosis by borough and relative deprivation**[6].

Borough	% of staged cancers staged at stage 1/2	Early Stages Rank: (Highest = worse early stage)	RMP Rank of Deprivation (Lowest = highest deprivation)
	2018	2018	2019
Brent	50.4%	14	1
Ealing	51.9%	13	2
Hillingdon	55.6%	12	8
Merton	55.7%	10	11
Hammersmith and Fulham	55.8%	9	4
Westminster	55.7%	11	7
Kensington and Chelsea	56.6%	7	6
Croydon	56.5%	8	5
Kingston upon Thames	57.4%	6	13
Harrow	58.1%	4	10
Richmond upon Thames	58.0%	5	14
Hounslow	58.6%	3	3
Wandsworth	60.0%	2	9
Sutton	60.5%	1	12

The biggest win to improving stage of diagnosis is to reduce variation at borough level, which currently sits at over 10% between the highest and lowest boroughs.

The differences in staging between boroughs have been analysed in a number of ways. We know that deprivation has a role (Datapoint 2), and we know that deprived patients are less likely to come forward quickly, or be referred as quickly as their non-deprived counterparts (Datapoint 3 and 4). However, at borough level this does not completely explain the differences. For instance Hounslow has high rates of early diagnosis, despite being in the third most deprived area in NWL and SWL. Other factors such as access, tumour differences and screening differences have been examined, and again do not explain the differences seen at borough level.

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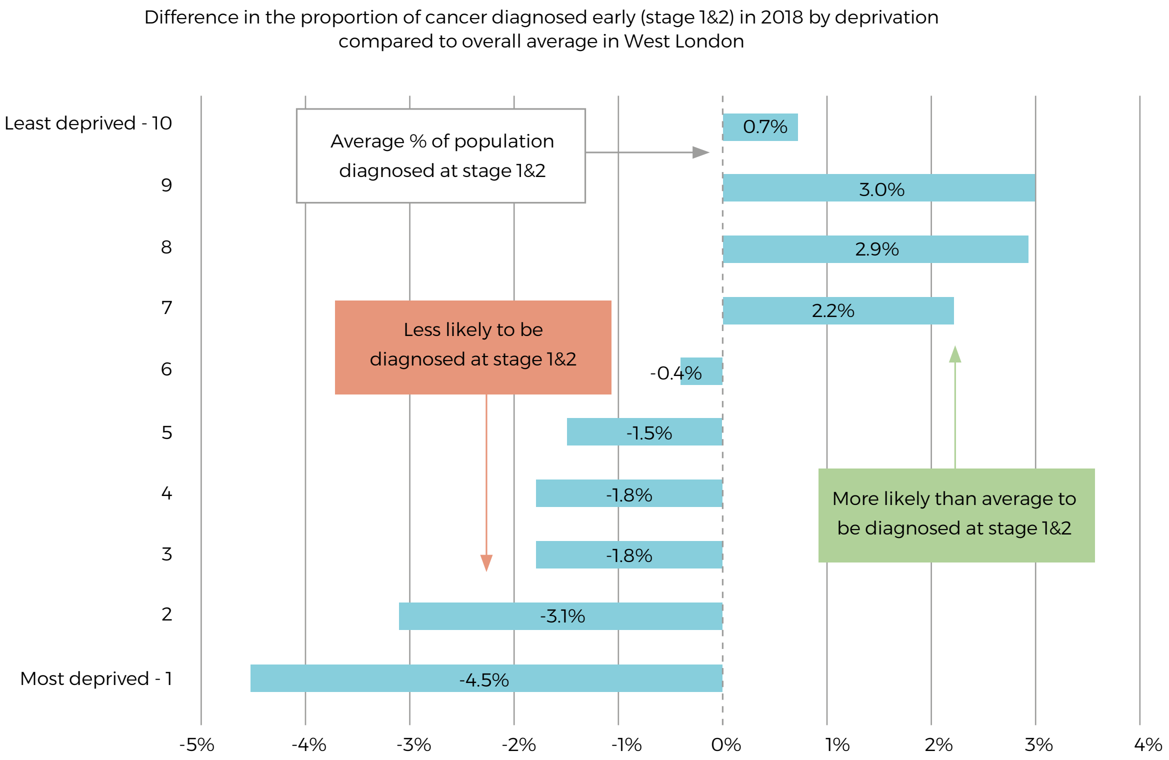
[6] Source: 2018 incidence COSD Level 3 https://cancerstats.ndrs.nhs.uk/ www.gov.uk/government/statistics/english-indices-of-deprivation-2019

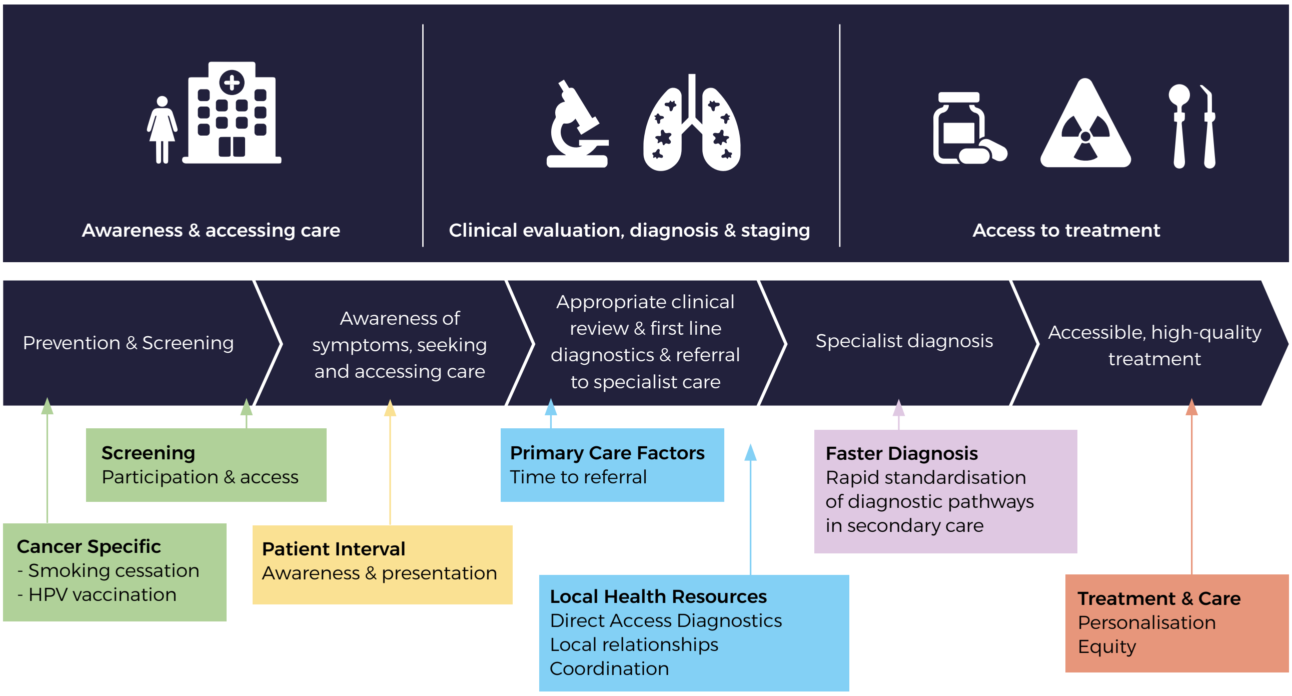
Datapoint 2: **Early stage diagnosis and deprivation. 0= average stage of diagnosis for NWL and SWL (2018)**



1.1.1 Stages to a Cancer Diagnosis

The below model, adapted from the WHO Early Diagnosis Guide, shows the stages required to enable a patient to receive a cancer diagnosis and treatment, and the associated work programmes to deliver improvements.

Infographic 1: **Adapted WHO Early Diagnosis and Treatment (RMP 2024)**



Given the lack of actionable insights we have by tumour site, RM Partners has been intensively focusing on understanding differentials in screening, patient and referral interval. Together these three factors, particularly the patient and referral interval, have the most significant impact on early diagnosis across RM Partners.

1. Differences in screening participation

Using the WSIC tool, RM Partners has been able to assess populations and groups least likely to have screening. These are:

	Cervical	Bowel
Least likely	Women under 30 years of age and Chinese women	All men Most deprived 17% less likely to engage with screening
No difference demonstrated	Deprivation score is not related to uptake	

2. Differences in patient behaviour- the patient interval

Work undertaken in NWL[7], involving 11 different community grassroots organisations who were asked to assess barriers to participation in cancer screening also highlighted some factors which may impact on seeking help with cancer symptoms, including:

- Sense of fatalism – specifically rough sleepers
- Stigma of a cancer diagnosis in different communities
- Cultural barriers which impact on seeking help independently

We also know from the Covid pandemic these groups have far less trust in health services.

Datapoint 3: **The patient interval by inequality group – more or less likely than average to present at their GP within 3 months of symptom onset. (0= average for RMP)**

Percentage variance by inequality profile:
Seeing your GP <3 months after thinking something may be wrong

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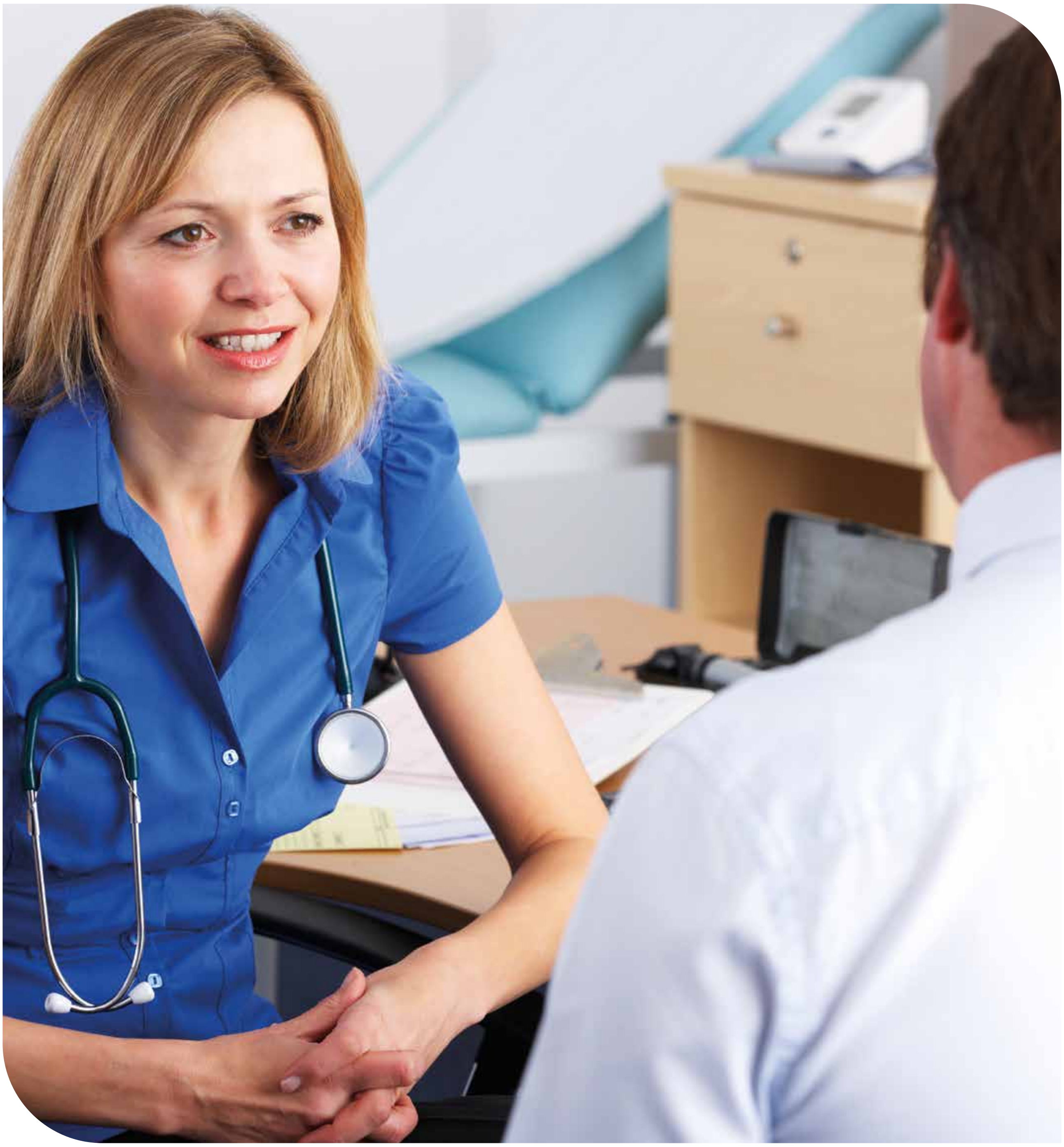
[7] Barriers to cancer screening programme 2023. Community grassroots organisations, RM Partners & ICS Communication & Engagement Team

Work to address this is being undertaken through continuing work with grass roots organisations, and through finding ways for patients to be supported in preparing for GP appointments.

Differences in primary care behaviour

Studies show the variation in experience and pathways for people of different ethnicities when presenting with potential cancer symptoms in primary care. A study of men with prostate cancer symptoms (Martin et al., 2021) found that only 47% of Black men who were offered a digital rectal exam received this offer during their first appointment, compared with 72% of white men. Analysis by RM Partners of 2022 National Cancer Patient Experience Survey (NCPES) data showed relative delays in both the patient interval and referral interval for people who were more deprived, who self-classified as Black, Asian or mixed, had a long term condition or were LGBT+ (NCPES 2023).

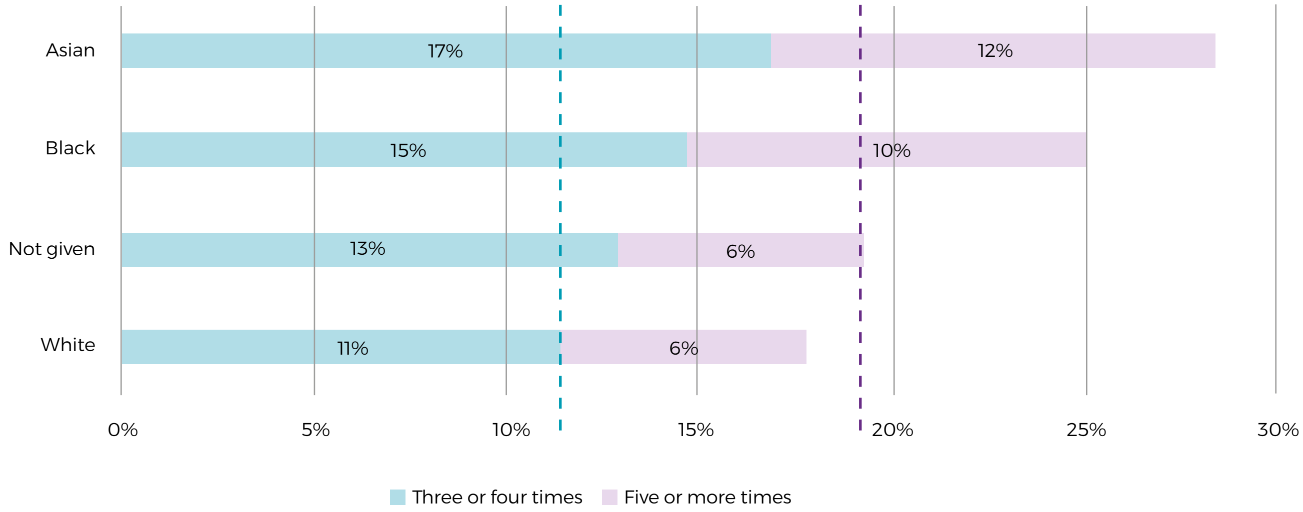


Datapoint 4 & 5: **The referral interval by inequality group: percentage of people needing to see a professional at their GP practice more than twice prior to cancer diagnosis**

Percentage variance by inequality profile:
Seeing a primary care professional <3 times prior to diagnosis

Before you were diagnosed, how many times did you speak to a healthcare professional at your GP practice about health problems caused by cancer?

Dotted line represents national average overall
Three or four times: 12% Five or more times: 7%



To understand what factors may be influencing referral behaviour and contributing to stage of diagnosis, several metrics were reviewed. Metrics which give insight and indications of cancer referral practice in primary care are available nationally via the Fingertips[8] website and include:

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[8] Cancer Services - OHID (phe.org.uk)

Conversion rate: The conversion rate is the proportion of urgent suspected cancer referrals which result in a diagnosis of cancer.

TWW (USC) /100,000: The number of urgent suspected cancer referrals observed in the registered population divided by the number expected based on the practice's age-gender specific population and the age-gender specific rates for England[9]. Round et al. (2020) found that higher volume of referrals for suspected common cancers (colorectal, lung, breast, and prostate) within GP practices was associated with lower mortality for common cancer types in a cohort study of 1.4 million patients in England diagnosed between 2011-15. However, referral volume as a stand-alone metric is not necessarily an indication of good practice, and the significant increase in TWW/ USC referrals in the last three years has contributed to increased waiting times in this pathway, which leads to increased diagnostic pressures downstream. More important is the appropriate use of the TWW/ USC pathway, rather than simply volume.

Detection rate: This is the proportion of recorded cancers which receive first treatment resulting from an urgent referral for suspected cancer, as opposed to any other route. Data is available nationally, at ICS and at GP practice level, both annually and over five years. In primary care, one year data is less reliable as numbers are too small to be significant for small volume practices, so five-year rates are used throughout this report.

Overall, diagnosis via USC referral from primary care, relative to all other routes excluding screening, is associated with diagnosis at an earlier stage. This in turn is associated with substantial improvements in survival. The detection rate measures the proportion of patients diagnosed via USC referral and therefore it is reasonable to assume that a higher detection rate could be associated with an increase in early diagnosis and improved patient outcomes.

Møller et al (2015) assessed 215,000 cancer patients diagnosed or first treated in England in 2009-2013 and found reduced mortality for patients from GP practices with both higher detection and standardised referral rates (for USC), suggesting the utility of deploying these metrics to improve patient outcomes.

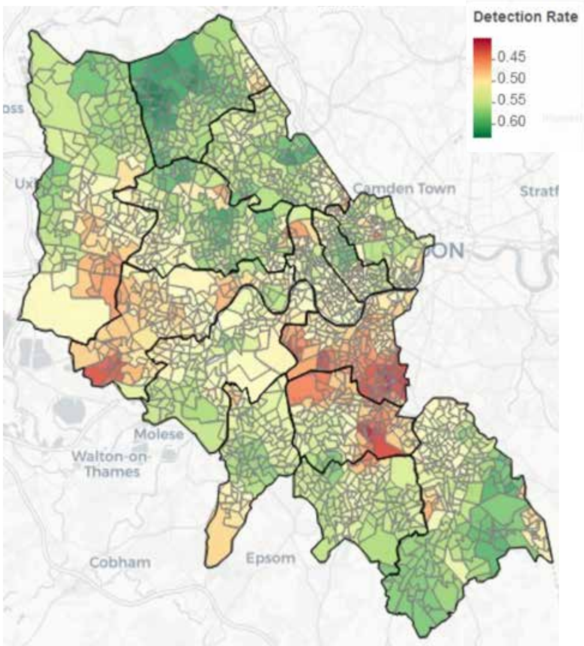
In 2021/22, 7,531 cancers in RM Partners were diagnosed via USC referrals, out of a total of 14,062 cancers. This gives a detection rate of **53.6%**. This is slightly below the national average of 54.8% but above the London average of 52.8%.

A recent study of cancer detection rates at the primary care level conducted by RM Partners with Edge Health revealed significant geographical **variation** in the detection rate within West London. An output of this work was a data visualisation tool to facilitate understanding of the variation in detection rate in West London (Datapoint 6).

To better understand factors which may aid early diagnosis and develop actionable insights, detection rate was chosen as the initial premise, with variation in the detection rate used to sample practices for interviews. This is described in greater detail in the Approach and Methodology report (part 2).

The observed variation in detection rate across England is due to a complex interaction of elements. These may be broken down into three broad categories, to allow for more in-depth assessment: patient factors, clinician or practice factors and system factors (Aarhus et al, 2012).

Datapoint 6: **Detection rate by ward NWL/ SWL boroughs** (National average GP surgery 54.1%, national maximum 78.9%)



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[9] https://fingertips.phe.org.uk/profile/cancerservices

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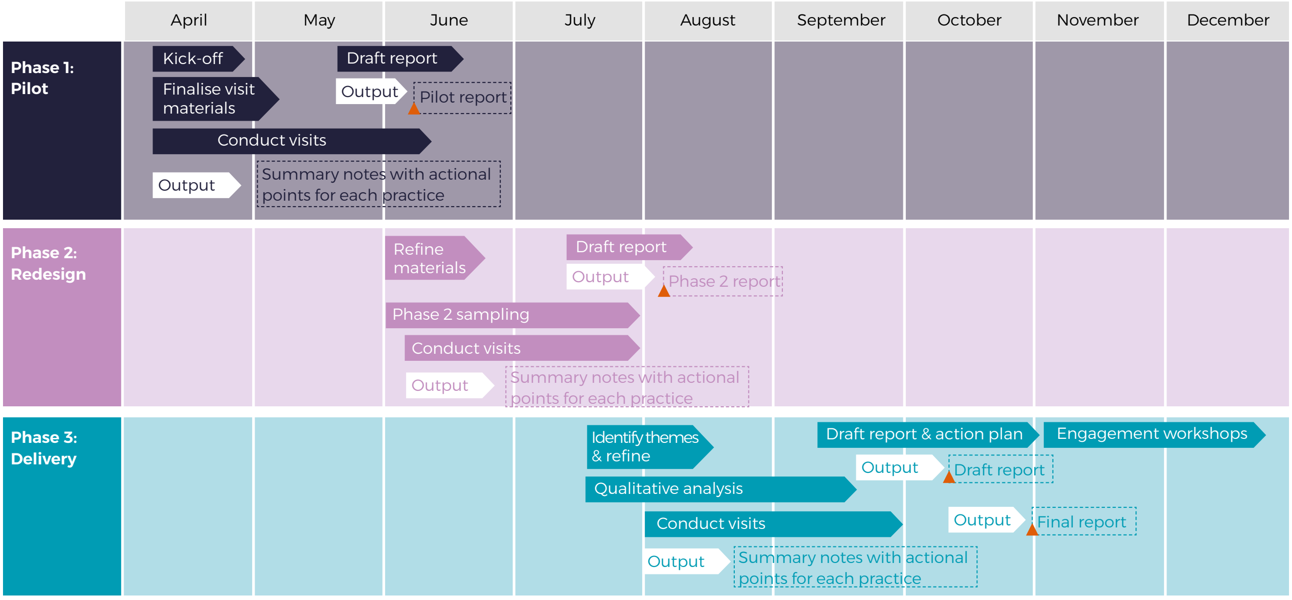
Approach & methodology

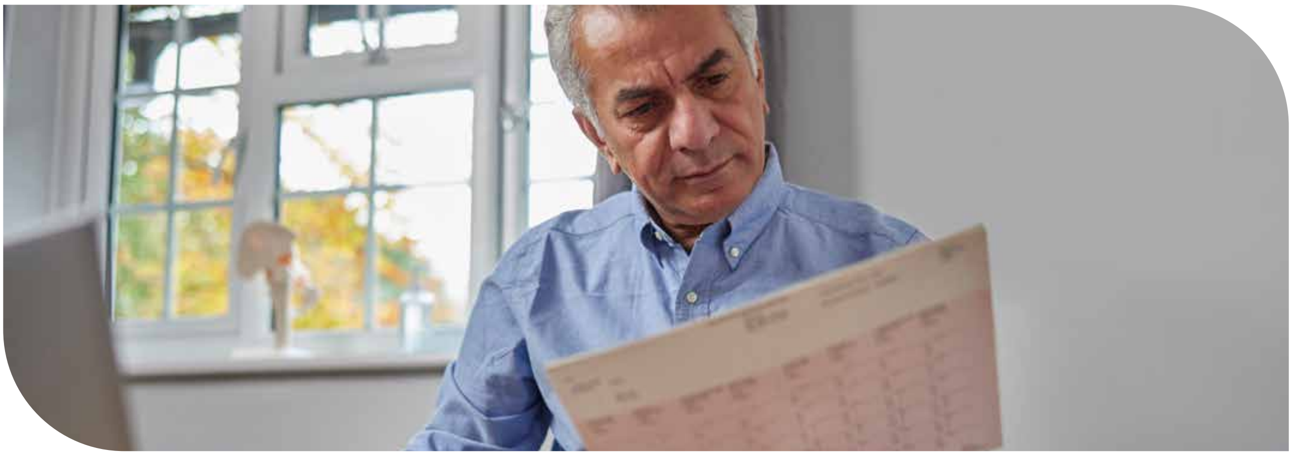
Early cancer diagnosis is the key requirement of cancer alliances and in order to understand how best to reduce variation in this area the Primary Care Cancer Improvement Programme undertook:

- A literature review;
- An analysis of all quantitative metrics publicly available in primary care correlated against the detection rate;
- A qualitative review through direct engagement with practices to better understand clinical, practice and system factors which may be impacting on early cancer diagnosis and give actionable insights and practical implementation approaches. The timeline of the qualitative review is in Infographic 2;
- In total 114 practices were sampled, with 56 responses, and 46 participating through interview.

Infographic 2: **Project timeline**



The strengths and weaknesses of the approach are described in greater detail in the Improving early cancer diagnosis – evidence-based interventions for primary care: Part 2 Approach and Methodology.



3 Findings: quantitative review

3.1 Analytical framework

This is described in detail in the Part 2 report. The Analytical Framework used to interpret and understand results is in Appendix 2. The table below outlines the overarching themes that were explored during practice interviews and which formed the basis of our data gathering.

Table 3: **Thematic analysis**

	Population Factors, as reported by the practice	Clinical / Practice Factors	System Factors
Themes explored/ emergent across engagement	· Awareness of under-represented groups · Implementing group-specific access strategies for different communities (e.g., highly deprived patients, patients from diverse ethnic backgrounds, older patients, non-English speaking patients, etc.).	. Clinician decision-making when referring patients; . Proactive safety netting processes at the practice; · Workforce stability; · Processes for shared learning.	. Engagement with PCNs and wider cancer audits along with the use of system-wide resources (e.g., RDCs); . Effective relationships between primary and secondary care.

Note: The qualitative research approach did not rely on a standardised survey questionnaire. Instead, conversations were guided by a topic guide, allowing flexibility. This means that while the guide provided a framework, there was no assurance that all topics were discussed or that questions were asked uniformly across interviews.

The interview material identified specific themes and statements. For each statement, we calculated how frequently this had been recorded amongst high and low detecting practices, expressed as a percentage. We repeated the process across the wider themes, to identify which, if any, were particularly different across the two groups. These are detailed in the Part 2: Approach and Methodology report.

This approach allowed us to evaluate practice responses against the thematic framework, resulting in a total against all practices and compare the lowest detection rate with highest detection rate practices.

Table 4: **Frequency of high-level themes**

Theme	Sub-theme	All	High Detection Rate Practices (n = 28)	Low Detection Rate Practices (n = 18)	Difference
A. Clinician/ Practice Factors	A.1. Threshold for referral	57%	55%	58%	-3%
	A.2. Proactive safety netting practices	66%	69%	60%	9%
	A.3. Stable workforce	76%	86%	61%	25%
	A.4. Cancer awareness and shared learnings	76%	69%	61%	8%
B. Population and Inequality Factors	B.1. Awareness of under-represented groups	76%	77%	61%	5%
	B.2. Implementation of group-specific access strategies	51%	50%	52%	-2%
	B.3. Strategies to facilitate access	59%	55%	64%	-9%
C. System Factors	C.1. Engagement with PCN and audit	40%	43%	36%	7%
	C.2. Use of system-wide resources (RDC)	78%	82%	72%	10%
	C.3. Use of system-wide resources (other)	52%	68%	28%	40%
	C.4. Relationship with secondary care	39%	48%	25%	23%

3.2 Themes impacting on detection rate

This section reviews the level of variation between high and low detection rate practices, for each of the themes included within the framework.

3.2.1 Clinician/Practice Factors

Summary

Factors more common to practices with a higher detection rate, relative to lower detection rate practices:

- Stability of workforce and low locum use
- Awareness of cancer data and regular discussion of cases internally
- Nature, rigour and quality of safety netting, in particular the use of existing safety netting templates, as opposed to processes developed within the practice
- Use of decision support tools

Common factors between high and low detection rate practices:

- Use of gut instinct
- Loose adherence to cancer referral guidance

The majority of time within the interviews was spent on clinician and practice factors, which are directly controlled by the practice. This interview feedback obtained can also be combined with quantitative measures, such as referral volume and conversion rate, to create a broader picture of how potential cancer is managed within primary care. The full breakdown of practice responses by thematic area is available in Appendix 3.

There was a significant difference observed between high and low detection rate practices related to **workforce, specifically practice workforce stability.** On average 86% of high detection rate practices (24 of 28) provided positive feedback in relation to workforce stability and engagement in cancer diagnosis. This compares to just 61% (11 of 18) of low detection rate practices. **This issue was commonly reported as a barrier to consistent referral behaviour, with practices finding it more challenging when staffing frequently changes.**

This difference in stability of workforce can be seen within the locum workforce of interviewed practices. **Low detection rate practices had, on average, nearly four times as many locums** (0.39) as high detection rate practices (0.11). This instability is compounded when the shortfall in available staff is filled by locums who are not necessarily aware of practice or wider system processes and procedures.

The interviews discussed awareness of data, training and in-practice reviews of specific cases to share learnings. **High detection rate practices were nearly twice as likely to report that they were aware of their cancer-specific data** (18 of 28) than low detection rate practices (6 of 18). They were also slightly more likely to report that **specific cases were discussed within the practice** (24 of 28, compared to 14 of 18 in low detection rate practices). By contrast, a higher proportion of low detection rate practices reported having staff attend cancer-specific training, implying that training in isolation will not improve cancer practice.

Most practices reported meeting to discuss processes around cancer diagnosis and periodic sharing of learnings. However, practices were not consistently aware of either their cancer referral data or of cancer training available. An example of a practice that emphasises both clinical and non-clinical training is described below:

Detection Rate:
53.4%
average

Borough: **Merton**

Case Study: Staff training

Non-clinical staff training is given priority, and vulnerable patients can be highlighted in medical notes even by non-clinical staff. Receptionists received training on red-flags recognition, and the practice has appointed a non-clinical Cancer Lead, who converses with the clinical team once a month and oversees safety netting. This training was conducted by CRUK and incorporated into training for health navigators. (Practice A)

Several interviews covered the threshold for referrals which practices use, particularly where practices may have what they perceived to be lowered thresholds. **Although data on the number of USC referrals suggests different behaviour, discussions across high and low detecting practices were similar.**

Interviews explored this finding in more detail, with a particular focus on NG12 guidance and whether practices employ a referral threshold that is not in line with this guidance. **Most practices reported using a combination of guidance and "gut feeling" to refer patients**, especially experienced clinicians or practices that do not routinely use decision-support tools.

Use of other **system-wide resources** (such as ARDENS or C the Signs) showed a much larger difference **(20 of 28 high detection rate practices, compared to just 5 out of 18 low detection rate)** and could have greater implications for minimising variation in referrals and cancer detection rate across practices.

A high detection practice described this in more detail in the case study below. **Some practices indicated patient anxiety/request for referral playing a role.** It should be noted that whilst responding to patient anxiety was mentioned in multiple discussions, accounting for patient anxiety in a referral decision does not reflect best practice or alignment with NG12 guidance.

Across the board, the interviews with both high and low practices **did not suggest a close adherence to NG12 guidance**[11]. Although this is common to both high and low detection rate practices, any deviation from standard guidance provides scope for clinician-to-clinician or practice-to-practice variation. The substantial range in referral volumes between practices highlights the scale of this. This approach also risks exacerbating existing health inequalities and unconscious bias within the health system and clinician behaviour.

Detection Rate:

57.7%

high

Borough: **Hillingdon**

Case Study: Referral behaviour

The practice reports using NICE guidance but more so NWL guidance (that guidance is on the home screen most of the time). In terms of ambiguous referrals, the clinicians go on gut feeling. Because it is a small practice, staff report speaking with each other quite a lot (“in each other’s rooms a lot”), asking what another clinician thinks. If someone thinks it should be a 2WW, then it usually goes in as a 2WW. The practice does have a fairly educated cohort of patients that may want specific care and that might trigger a referral but for the most part, referrals are clinician led. (Practice B)

The overall level of self-reported use of safety netting was relatively consistent between high and low detection rate practices. Most practices referenced the use of safety netting in some form.

There were **important differences in the nature, rigour and proactivity of safety netting processes. High detection rate practices were significantly more likely to report use of more advanced templates**, such as those provided by the locally commissioned clinical decision support tools (CDSTs) **for safety netting rather than solely relying on in-house systems** (15 of 28 vs 6 of 18). The CDSTs support consistency in safety netting systems and patient trackers, which allowed practices to evidence standards of safety relating to their USC referrals. For locally generated systems, often managed by administrators, standards around safety netting are less evident and can lack reliability because they are user dependent. Therefore, the success factors of safety netting are not only about the system but the wider buy in to improved oversight for the whole practice.

High detection rate practices were more than twice as likely to safety net patients being investigated outside 2WW/USC referral pathways (10 out of 28 vs 3 out of 18). This again suggests a link between the breadth and rigour of a practice’s safety netting process and the impact on patient outcomes.

This link is not necessarily directly causal: as well as supporting patients to get a rapid diagnosis, adoption of a best practice safety netting system and process seems to be an effective indicator of high-quality processes across a practice’s operation.

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[11] Note that not all clinicians are aware what “NG12 guidance” refers to. Some clinicians reported referring in line with local/national guidance without recognising that this was NG12.

Overall the clear message from the interviews is that **the actionable insight is not merely having a safety netting process, but having an approach to safety netting which is adopted across the practice, can be checked by any member of the team, is comprehensive and accompanied by clear accountability and roles.**

One practice, in particular, highlighted key aspects of their proactive process:

Detection Rate:

66.0%

high

Borough: **Croydon**

Case Study: Safety netting process

"We've told the patients that if they don't hear from the hospital to call us within two weeks….We give them a copy of the referral letter as well so they've got the information if they need to contact the hospital. And then our secretary has a spreadsheet to keep track of all the referrals. We have got another admin staff; she goes through ARDENS searches to check if we haven't received any correspondence from the hospital and then we'll try to contact the patients to see what happened. The cancer office will phone us if there's a problem with the referrals. If the cancer office phones us, then we may have to resubmit the referral. Or the hospital sends two DNA letters out to us if the patient hasn't been able to attend or won't attend. Then we mark that down on their records. We do a screen drop-down message so that everyone who works with that patient is aware of it and can discuss it with the patient. And a GP or cclinician will speak to the patient. We'll send them a text message asking them to come in and we also send them a letter if we can't contact them." (Practice C)

3.2.2 Population and Inequality Factors

Summary

Factors more common to practices with a higher detection rate:

None

Common factors between high and low detection rate practices:

- Awareness of population in terms of deprivation, age, ethnicity, language differences.
- Implementation of population-group approaches to improve access.
- Strategies to reduce barriers to accessing appointments for all patients.

In addition to clinician and practice factors, the interviews provided an additional perspective on population and inequality factors and, more valuably, what can be done at clinician and practice level to address them. It is important to note this information is a clinical perspective only, and does not reflect the community perspective, though does help to understand the current understanding in primary care of these issues.

Across the board, **no significant difference was seen in the feedback received from high and low detection rate practices regarding population and inequality factors.** If anything, practices with a lower detection rate were more likely to report awareness of challenges their populations may experience in accessing appointments and had put measures in to address this.

Moreover, practices described measures and strategies to facilitate access to different populations. **Most practices recognised the importance of identifying patient characteristics more often associated with delayed presentation and/or referral.** Most commonly, this related to patients from diverse ethnic backgrounds, non-English speakers, or patients in more deprived areas.

NCPES data highlights the disparity in both experience and level of delay in referral for USC between population groups. The cause of this disparity (which is observed nationally) is likely to reflect systemic discrimination and has been seen in other services such as maternity. The new Health Service Act acknowledges the need to address this by placing statutory duties on the NHS commissioners and organisations to collect information to address health inequalities, including on the differences in outcomes experienced by some groups[12]. **Systemic discrimination is defined as the inherent and often unconscious biases that exist within societal systems, policies and institutions (Drew 2023).**

The interviews provided the opportunity to share data (e.g. NCPES) with practices to inform and educate clinicians. During the practice discussions, cancer data was shared at practice and RMP level. This was appreciated by practice teams and shows the benefit of working at practice level.

The interviews did not demonstrate awareness of differences in the referral interval within primary care. For example, no practice proactively cited awareness that patients could have differential outcomes as a result of their primary care experience, such as number of occasions patients needed to see a clinician before referral. **Levels of awareness of the clinician's role in ensuring equity of experience, pathways and outcome with regards to bias and health inequality were low. This was true in both high and low** detection rate practices. The need to improve awareness and skills in addressing systemic bias is needed to ensure equity and may also support significant improvements in detection rates across RMP.

Current measures to facilitate access and equity of experience are not effective enough to overcome and remove the substantial barriers to equitable access and experience of primary care and the wider healthcare system.

Implementation of group-specific strategies to support improved access and reduce health inequalities was a principal focus in later phases of the programme. Although this report is limited in the extent to which it can shed light on population and inequality factors (given it specifically explored only the clinician and practice perspective), the interviews did provide examples of strategies practices had implemented.

Detection Rate:

71.4%

high

Borough:

Westminister

Case Study: Use of multi-lingual staff

The practice has a large Arabic-speaking population; therefore, an Arabic-speaking pharmacist helps to translate and recognise red flags. (Practice D)

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[12] https://www.england.nhs.uk/long-read/nhs-englands-statement-on-information-on-health-inequalities-duty/

Detection Rate:
30.8%
high

Borough:
Westminster

Case Study: Multi-lingual health navigators

The practice reported serving a particularly high volume of Chinese students who are not familiar with the UK healthcare landscape and how to navigate it. For example, uptake of cervical screening is low. To support these patients, the practice has recently employed a Mandarin-speaking health advisor who helps patients navigate the health system in their language, while understanding cultural issues, and promoting screening when patients do make contact (e.g., to get the HPV vaccine). This has significantly helped to increase uptake of cervical screening amongst this population. (Practice G)

Individual practices reported that the above types of interventions had had positive impacts, including an increase in cervical screening uptake, and clinicians were able to identify specific cases where tailored outreach had had a favourable outcome. This suggests that primary care teams are likely to benefit from interventions to further understand population groups who experience barriers to access, so care models can be shaped to be more inclusive.

Summary

Factors more common to practices with a higher detection rate:

✓ Self-reporting of close co-ordination with secondary care colleagues
✓ Reported good access to diagnostic services and resources, including direct access
✓ Participation in local or national cancer audits
✓ Relationship with secondary care

Common factors between high and low detection rate practices:

✗ Engagement with community outreach initiatives

3.2.3 System Factors

Discussion with participating GP practices on system factors included review of access to, and knowledge of, integrated system resources as well as engagement with wider programmes at a PCN and national level.

No significant difference was seen in areas such as engagement with the PCN or knowledge of RDCs. **A substantial difference was practices' perception of access to diagnostic services** and the perceived rejection, or not, of referrals by secondary care**.** In both areas, high detection rate practices were far more likely to report positively about their relationship with other services. **Interestingly geographical difference did not account for this difference – that is the practices who noted issues with access were in a similar geographical location to those that cited good relationships**. This perception of difficulties accessing referral routes may partially explain why some low detection rate practices make fewer USC referrals.

While several practices reported engaging in community outreach programmes and other PCN initiatives, **far fewer low detection practices indicated participating in local or national cancer audits (4 out of 18, compared to 11 of 28 high detection rate practices).** This is a substantial difference between high and low detecting practices and suggests the possible importance of engaging in these quality improvement efforts. Below is an example of a high detecting practice which actively engaged in a national audit:

Detection Rate:
62.3%
high

Borough: **Richmond**

Case Study: Engagement in national audit

The practice has carried out an extensive audit of late presenters and cancer diagnoses between 2020/2021. The practice did not find common characteristics among missed patients, but did find the exercise very useful to understand their referral practices and whether there was room for improvement in their processes. The administrative team has now been well trained to triage and book patients in as a result of the audit. The team is committed to reviewing cancer diagnoses often and all diagnoses are discussed at each practice meeting. The practice was curious if there has been any increase in pancreatic cancer cases, as they have seen quite a lot of cases lately at their practice, even when there are no risk factors, and these patients have poor prognosis. The practice expressed interest around receiving borough morbidity data relative to cancer to support greater awareness of early stage cancer. (Practice H)

The majority of practices were aware of Vague Symptom Rapid Cancer Clinics, but the level of use varies. In more than one interview, we found a difference in understanding of this pathway between clinicians within the same practice. There were a higher proportion of high detection rate practices who were aware of and had used this pathway than low detection rate practices, but the difference was not significant. Many clinicians who had used Vague Symptom Rapid Cancer Clinics pathways reflected positively on them, but the interviews highlighted that substantial variation in awareness still exists which would benefit from targeted education and training.

Of the system level factors discussed, a significant difference between high and low detection rate practices was seen in terms of effective relationships with secondary care and particularly in relation to access to diagnostics. Lower detection rate practices were far more likely to report having referrals rejected by secondary care, or to perceive that they did not have good access to diagnostic services and resources. This could act as a constraint on the number of referrals made, which was less commonly found in high detection rate practices. The case study below describes this from a practice perspective.

Detection Rate:

32.6%

LOW

Borough:

Wandsworth

Case Study: Difficulties in communicating with secondary care

The practice reported a challenge with accessing secondary care diagnostics. They felt that they typically did not get good feedback on referrals and had examples of seeing nothing in notes after a patient had attended an appointment or not receiving a clinic letter.

In other examples, the practice reported that they had had 2WW referrals rejected but without explanation. There was no discussion between secondary care and the referrer on the reason for the rejection. (Practice I)

It is important to note that 2WW referrals cannot be “rejected”, although this was often the language used within the interviews. If a secondary care clinician does not feel that the referral was appropriate, or requires additional information, they are required to contact the referring clinician to discuss.

From a secondary care perspective, quality of referrals is a significant issue. For instance, an audit of breast TWW/ USC referrals across RMP in 2022 showed that **only 60% were fully completed and 17% had no clinical symptoms recorded[13].**

Conversely, **high detecting practices were much more likely to report actively using secondary care diagnostic services and having a smooth process between primary and secondary care** (16 of 28 high detection rate practices, compared to just 3 of 18 low detection rate practices). A few practices also indicated having close relationships through frequent communication with secondary care colleagues.

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[13] Reported at Breast PWG November 2022, 100 breast referrals reviewed

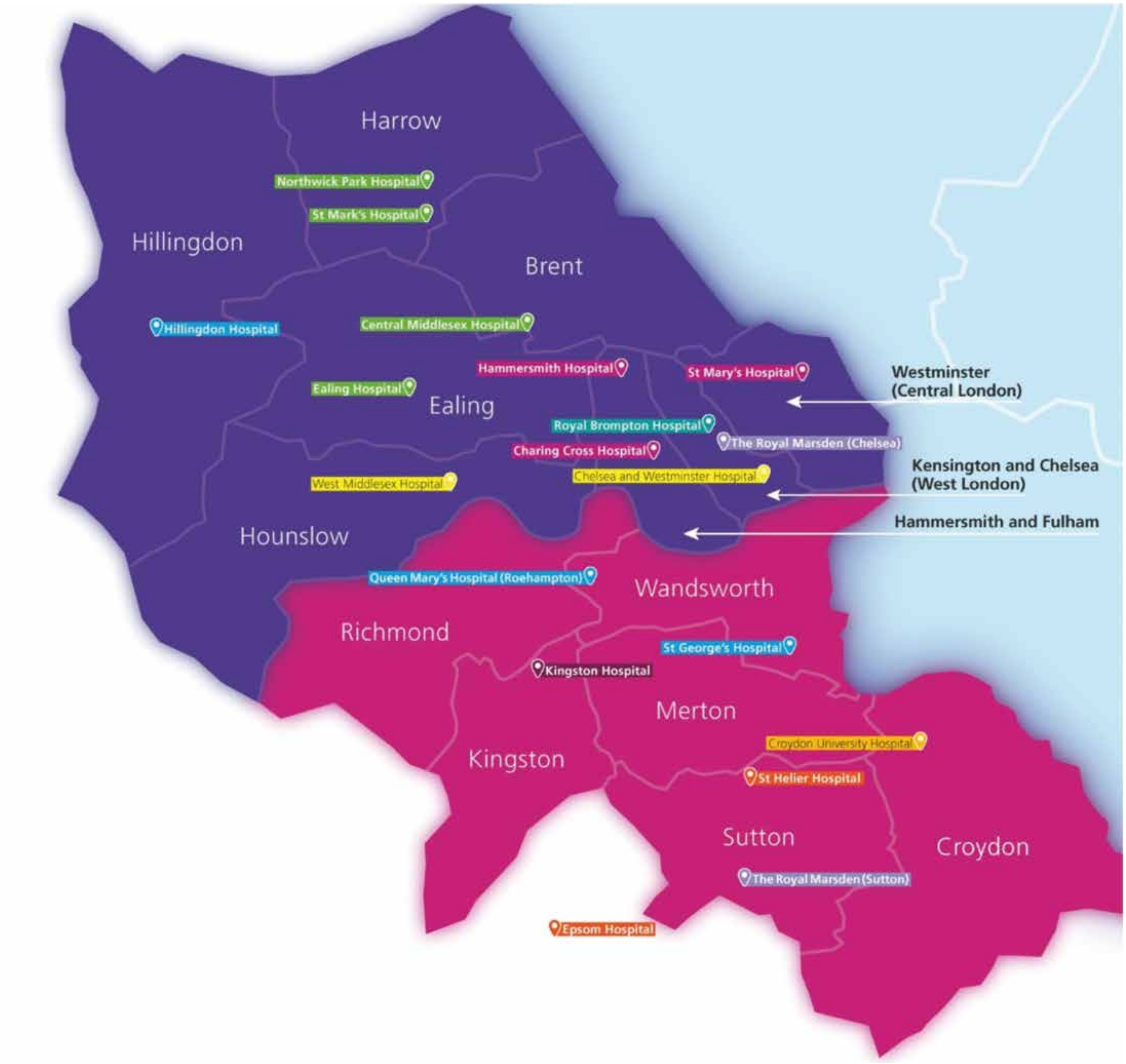
4

Evidence to action

From previous work in this area, wider research and our findings, it emerges that significant gains in early cancer diagnosis are likely to result from the sum of "marginal gains". That is, making defined, incremental gains that will return improvements. The early diagnosis programme has generated locally evidenced, practical actions to deliver those gains. The six key primary care actions to improve early detection rate are summarised below. These six actions, together with People and Community Engagement strategies to address the differences we see in early diagnosis in our more deprived populations and in the patient interval, have the potential to make inroads into the significant variation we see at borough level in early cancer diagnosis in NWL and SWL.

Issue	Solution	Sub actions
➨ Need to address differences in the referral interval for patients who are deprived, or have protected characteristics.	**Taking active steps to learn about and remove system inequity in primary care**	✓ Understanding causes of systemic inequity and impact on cancer referrals ✓ Unconscious bias training ✓ Implementation of approaches to reduce inequity at practice and individual level
➨ Aware of local and practice cancer data and sharing learning across the practice. ➨ Case review and training involving clinical and non-clinical team. ➨ Regularly review cancer data.	**Enhancing Practice** **Performance + Operations**	✓ Participation in external cancer audits ✓ Knowing practice cancer data ✓ Regular team look back & case review ✓ Use of Urgent Cancer Referral pathways (NG12)
➨ Use of decision support tools was 40% higher in high detection rate practices. ➨ Deeply embedding safety netting practice and using clear and accessible systems across the practice.	**Adoption of quality systems**	✓ Implementing quality systems; specifically decision support and safety netting systems which engender a whole team safety culture.
➨ A key differentiator between high and low detecting practices was the stability of workforce. ➨ Low detection rate practices had nearly 4x as many locums as high detection rate practices.	**Workforce Stability and Inclusion**	✓ Invest in practice workforce team to ensure a stable, skilled team ✓ Ensure locum orientation includes information of cancer referrals, encouragement to use decision support tools ✓ Involve longer term temporary staff in case review to foster practice improvement
➨ Participation in national cancer audits. ➨ Use of, and good experience with, direct access. ➨ Constructive relationships between practice and secondary care.	**System Awareness & Participation**	✓ Awareness and use of direct access ✓ Use of Vague Symptom Cancer Pathways ✓ Relationships between PCN members, ✓ Practice & secondary care
➨ Awareness and compliance with NG12 guidance ➨ Understanding of vague symptom guidance ➨ Variation in practice.	**Training & Clinical Improvement**	✓ Accessing cancer specific training to support the appropriate use of cancer pathways.

Appendix 1: RM Partners geography



North West London
Integrated Care System

Acute NHS Trusts

- Chelsea & Westminster Hospital NHS Foundation Trust
- Imperial College Healthcare NHS Trust
- London North West University Healthcare NHS Trust
- Royal Brompton & Harefield hospitals part of Guy's & St Thomas' NHS Foundation Trust
- The Hillingdon Hospitals NHS Foundation Trust
- The Royal Marsden NHS Foundation Trust

South West London
Integrated Care System

Acute NHS Trusts

- Croydon Health Services NHS Trust
- Epsom & St Helier University Hospitals NHS Trust
- Kingston Hospital NHS Foundation Trust
- St George's University Hospitals NHS Foundation Trust
- The Royal Marsden NHS Foundation Trust

Appendix 2: Analytical Framework

Table A.1: **Analytical framework for qualitative analysis.**

Theme	Sub-theme	Statement
A, Clinician/Practice factors	A,1. Threshold for referral	A,1.1 The practice reports having what they consider to be a low threshold for 2WW referrals (or recently lowered).
		A,1.2 The practice uses gut feeling (i.e., experience) to refer patients who have concerning symptoms but do not necessarily meet the 2WW criteria.
	A,2. Proactive safety netting practices	A,2.1 The practice actively reaches out patients to remind them of 2WW appointments.
		A,2.2 The practice has developed their own triaging / safety netting system.
		A,2.3 An admin staff member at the practice will follow up with patients placed on a 2WW referral.
		A,2.4 The practice uses advanced templates (i.e., ARDENS) to record safety netting of patients.
		A,2.5 The practice has developed their own safety netting process.
		A,2.6 The practice safety nets patients who are being investigated but not yet referred to 2WW.
	A,3. Stable workforce	A,3.1 The practice has a stable workforce including regular locums.
		A,3.2 Staff other than GPs are actively involved in patient care and cancer detection.
	A,4. Cancer awareness and shared learnings	A,4.1 The practice is aware of their cancer referral data.
		A,4.2 The practice staff has completed cancer-specific education and training.
		A,4.3 The practice meets regularly to share learnings about cancer cases internally.
B. Population Factors	B.1. Awareness of underrepresented groups	B.1.1 The practice is aware of the deprivation level of the local population.
		B.1.2 The practice is aware whether they have an older population and how this may impact access to services.
		B.1.3 The practice is aware they have patients from diverse ethnic backgrounds.
		B.1.4 The practice is aware whether they have a significant proportion of patients who are non-English speakers.
		B.1.5 The practice is aware whether they have a low uptake for cervical screening due to cultural sensitivities or age.
		B.1.6 The practice is aware whether they have an uninformed/uneducated population regarding recognising symptoms and presenting to the GP.
	B.2. Implementation of group-specific access strategies	B.2.1 The practice has specifically targeted underrepresented populations to attend screening.
		B.2.2 The practice actively accommodates non-English speaking patients using available resources such as LanguageLine or staff who speak language.
		B.2.3 The practice accommodates patients with different needs (i.e., hard of hearing etc.) when informing them of 2WW referrals.
	B.3. Strategies to facilitate access	B.3.1 The practice offers out-of-hours/weekend appointments to increase access.
		B.3.2 The practice offers multiple ways to book an appointment including online (i.e., PATCHS), via phone or in-person.

Theme	Sub-theme	Statement
C. System Factors	C.1. Engagement with PCN and audit	C.1.1 The practice engages in community outreach initiatives/ together with the PCN.
		C.1.2 The practice has participated in local or national cancer audits.
	C.2. Use of system-wide resources (RDC)	C.2.1 The practice uses RDC pathways for patients who present with symptoms with strong clinical concern but do not satisfy the criteria for a 2WW referral.
		C.2.2 The practice is aware of RDC pathways for patients who present with symptoms with strong clinical concern but do not satisfy the criteria for a 2WW referral.
	C.3. Use of system-wide resources (other)	C.3.1 The practice uses clinical decision-support tools (i.e. C the Signs, ARDENS) to refer patients.
	C.4. Relationship with secondary care	C.4.1 The practice does not have referrals rejected by secondary care.
		C.4.2 The practice uses advice and guidance lines.
		C.4.3 The practice staff coordinate closely with secondary care colleagues.
		C.4.4 The practice has good access to diagnostic services and resources.

Appendix 3: Frequency of thematic statements related to each theme

Clinician and practice factors: thematic statements

Table A.2: **Frequency of thematic statements related to clinician/practice factors.**

Theme	Statement	All	High Detection Rate Practices (n = 28)	Low Detection Rate Practices (n = 18)
A.1. Threshold for referral	A.1.1 The practice reports having a low threshold for 2WW referrals (or recently lowered).	57%	50%	67%
	A.1.2 The practice uses gut feeling (i.e., experience) to refer patients who have concerning symptoms but do not necessarily meet the 2WW criteria.	57%	61%	50%
A.2. Proactive safety netting practices	A.2.1 The practice actively reaches out patients to remind them of 2WW appointments.	52%	57%	44%
	A.2.2 The practice has developed their own triaging / safety netting system.	89%	86%	94%
	A.2.3 An admin staff member at the practice will follow up with patients placed on a 2WW referral.	93%	96%	89%
	A.2.4 The practice uses advanced templates (i.e., ARDENS) to record safety netting of patients.	46%	54%	33%
	A.2.5 The practice has developed their own robust safety netting process.	85%	86%	83%
	A.2.6 The practice safety net patients who are being investigated but not yet referred to 2WW.	28%	36%	17%
A.3. Stable Workforce	A.3.1 The practice has a stable workforce including regular locums.	74%	82%	61%
	A.3.2 Staff other than GPs are actively involved in patient care and cancer detection.	78%	89%	61%
A.4. Cancer awareness and shared learnings	A.4.1 The practice is aware of their cancer data.	52%	64%	33%
	A.4.2 The practice staff has completed cancer-specific education and training (i.e., Red Whale).	63%	57%	72%
	A.4.3 The practice meets regularly to share learnings about cancer cases internally.	83%	86%	78%

Population factors: thematic statements

Table A.3: **Frequency of thematic statements related to population factors.**

Theme	Statement	All	High Detection Rate Practices (n = 28)	Low Detection Rate Practices (n = 18)
B.1. Awareness of underrepresented groups	B.1.1 The practice is aware of the deprivation level of the local population.	89%	86%	94%
	B.1.2 The practice is aware whether they have an older population and how this may impact access to services.	57%	54%	61%
	B.1.3 The practice is aware they have patients from diverse ethnic backgrounds.	96%	96%	94%
	B.1.4 The practice is aware whether they have a significant proportion of patients who are non-English speakers.	78%	82%	72%
	B.1.5 The practice is aware whether they have a low uptake for cervical screening due to cultural sensitivities or age.	54%	54%	56%
	B.1.6 The practice is aware whether they have an uninformed/uneducated population regarding recognising symptoms and presenting to the GP.	76%	89%	56%
B.2. Implementation of group-specific access strategies	B.2.1 The practice has specifically targeted underrepresented populations to attend screening.	61%	68%	50%
	B.2.2 The practice actively accommodates non-English speaking patients using available resources such as LanguageLine or staff who speak language.	61%	57%	67%
	B.2.3 The practice accommodates patients with different needs (i.e., hard of hearing etc.) when informing them of 2WW referrals.	30%	25%	39%
B.3. Strategies to facilitate access	B.3.1 The practice offers out-of-hours/weekend appointments to increase access.	28%	18%	44%
	B.3.2 The practice offers multiple ways to book an appointment including online (i.e., PATCHS), via phone or in-person.	89%	93%	83%

System factors: thematic statements

Table A.4: **Frequency of thematic statements related to system factors.**

Theme	Statement	All	High Detection Rate Practices (n = 28)	Low Detection Rate Practices (n = 18)
C.1. Engagement with PCN and audit	C.1.1 The practice engages in community outreach initiatives together with the PCN.	48%	46%	50%
	C.1.2 The practice has participated in local or national cancer audits.	33%	39%	22%
C.2. Use of system-wide resources (RDC)	C.2.1 The practice uses RDC pathways for patients who present with symptoms with strong clinical concern but do not satisfy the criteria for a 2WW referral.	76%	82%	67%
	C.2.2 The practice is aware of RDC pathways for patients who present with symptoms with strong clinical concern but do not satisfy the criteria for a 2WW referral.	80%	82%	78%
C.3. Use of system-wide resources (other)	C.3.1 The practice uses clinical decision-support tools (i.e. C the Signs, ARDENS) to refer patients.	52%	68%	28%
C.4. Relationship with secondary care	C.4.1 The practice does NOT have referrals rejected by secondary care.	40%	50%	22%
	C.4.2 The practice uses advice and guidance lines.	57%	61%	50%
	C.4.3 The practice staff coordinate closely with secondary care colleagues.	20%	25%	11%
	C.4.4 The practice has good access to diagnostic services and resources.	41%	57%	17%

Glossary of terms and acronyms

2WW	Previous two-week-wait (urgent suspected cancer/USC) referral
CL	Cancer Lead
CR	Conversion rate – The proportion of urgent suspected cancer referrals which result in a diagnosis of cancer. Measured throughout the report using a 5-year average (2017/18-2021/22).
Core20PLUS5	A programme generated by NHS England to target areas of health inequality, focusing on populations living in the top 20% most deprived areas, as well as other population groups identified at a local level
CRUK	Cancer Research UK
DR	Detection rate – the proportion of cancers diagnosed via an urgent suspected cancer referral from primary care. Measured throughout the report using a 5-year average (2017/18-2021/22).
DES	Directed Enhanced Service
DNA	Did Not Attend
EHR	Electronic Health Record
FIT	Faecal Immunochemical Testing
FTE	Full Time Equivalent
GI	Gastrointestinal
GP	General practice
HPV	Human Papillomavirus
IMD	Index of Multiple Deprivation
MRI	Magnetic Resonance Imaging
NCPES	National Cancer Patient Experience Survey
NICE	National Institute for Health and Care Excellence
NWL	North West London
PCN	Primary Care Network
PHE	Public Health England
QOF	Quality and Outcomes Framework – Measures of disease prevalence and primary care quality achievemen
RDC	Rapid Diagnostic Centres – a diagnostic pathway for patients with non-specific symptoms that could indicate cancer
RMP	RM Partners
SEA	Significant Event Analysis
SWL	South West London
USC	Urgent Suspected Cancer referral – previously referred to as a Two Week Wait (2WW) referral

Improving early diagnosis of cancer – primary care practice which makes a difference

The greatest improvement we can make is to reduce the variation between the highest and lowest boroughs for early cancer diagnosis. This would shift 941 patients/ year into early diagnosis.
There are 6 improvement domains:

1

Practice performance + Operations

- ✓ Participation in external cancer audits
- ✓ Knowing practice cancer data
- ✓ Regular team look back & case review
- ✓ Use of Urgent Cancer Referral pathways (NG12)

2

Adoption of quality systems

- ✓ Use of decision support tools
- ✓ Use of a safety netting system that encourages a safety culture... underpinned by a culture of quality improvement

3

Addressing systemic inequity

- ✓ Understanding causes of systemic inequity and how it impacts cancer
- ✓ Unconscious bias training
- ✓ Implementation of approaches to reduce inequity

4

Workforce stability

- ✓ Stability of workforce across the practice
- ✓ Low locum usage
- ✓ Ensuring clear orientation of locums

5

System Awareness & Participation

- ✓ Awareness and use of direct access
- ✓ Use of Vague Symptom Cancer Pathways
- ✓ Relationships between PCN members,
- ✓ Practice & secondary care

6

Training & Clinical Improvement

- ✓ Participation in cancer training to enhance clinical awareness
- ✓ Cancer referral training to maintain awareness of new guidelines

Notes

Edge Health

RM Partners
NW & SW London Cancer Alliance

NHS