

To what extent do Primary Care Practitioners retain responsibility for follow-up during the diagnostic process?

A secondary analysis of International Cancer Benchmarking Partnership data.

Nicholson BD¹, Goyder CR¹, Bankhead CR¹, Toftegaard BS², Rose PW¹, Thulesius H³, Vedsted P², Perera R¹

¹Nuffield Department of Primary Care Health Sciences, University of Oxford, UK

Brian D Nicholson, Clinical Researcher, brian.nicholson@phc.ox.ac.uk

Clare R Goyder, Clinical Researcher, clare.goyder@phc.ox.ac.uk

Clare R Bankhead, University Research Lecturer, clare.bankhead@phc.ox.ac.uk

Peter W Rose, University Lecturer in Primary Care (retired), peter.rose@phc.ox.ac.uk

Rafael Perera, Professor of Medical Statistics, rafael.perera@phc.ox.ac.uk

²Research Unit for General Practice, Aarhus University, Aarhus, Denmark.

Peter Vedsted, Professor of Primary Care, p.vedsted@ph.au.dk

Berit S Toftegaard, Clinical Researcher, berit.toftegaard@feap.dk

³Department of Clinical Sciences, Lund University, Växjö, Sweden.

Hans Thulesius, Associate professor of Family Medicine, hansthulesius@gmail.com

Correspondence to: Brian D Nicholson
University of Oxford,
Nuffield Department of Primary Care Health Sciences,
Radcliffe Observatory Quarter, Oxford, OX2 6GG.

e-mail: brian.nicholson@phc.ox.ac.uk

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How this fits in.

It is unclear to what extent Primary Care Practitioners (PCPs) retain responsibility for follow-up actions during the diagnostic process. We found international variation in how PCPs retain responsibility dependent upon the structure of the primary healthcare system and the PCPs level of concern for their patient. Shared responsibility between patient and PCP, or “double safety netting”, requires further investigation as a strategy used in cases of greatest concern. Electronic health record based systems to facilitate follow-up actions are underutilised at present, and research into their development and uptake seem warranted.

Abstract

Background

It is unclear to what extent Primary Care Practitioners (PCPs) should retain responsibility for follow-up to ensure that patients are monitored until their symptoms or signs are explained.

Aim

To explore the extent to which PCPs retain responsibility for diagnostic follow-up actions across 11 international jurisdictions.

Design and Setting

A secondary analysis of survey data from the International Cancer Benchmarking Partnership.

Method

We counted the proportion of 2,879 PCPs who retained responsibility for each area of follow-up (appointments, test results, and non-attenders). Proportions were weighted by the sample size of each jurisdiction. Pooled estimates were obtained using a random effects model and UK estimates were compared to non-UK ones. Free text responses were analysed to contextualise quantitative findings using a modified grounded theory approach.

Results

PCPs varied in their retention of responsibility for follow-up from 19 to 97% across jurisdictions and area of follow-up. Test reconciliation was inadequate in most jurisdictions. Significantly fewer UK PCPs retained responsibility for test result communication (73% vs. 85%, $p=0.04$) and non-attender follow-up (78% vs 93%, $p<0.01$) compared to non-UK PCPs. PCPs have developed bespoke, inconsistent solutions to follow-up. In cases of greatest concern, “double safety netting” is described where both patient and PCP retain responsibility.

Conclusions

The degree to whether PCPs retain responsibility for follow-up is dependent on their level of concern about the patient and their primary care system’s properties. Integrated systems to support follow-up are at present underutilised and research into their development, uptake, and effectiveness seems warranted.

Introduction

In primary care, the evolving diagnostic process incorporates: (i) the patient-professional encounter; (ii) performance of diagnostic tests; (iii) follow-up and tracking of diagnostic information over time; (iv) communication and coordination of referrals; and (v) patient behaviours, adherence and engagement (1). These elements need not all occur, may occur out of sequence, and may form part of a 'wait-and-see' strategy due to the low risk of serious disease in primary care (2, 3). Diagnostic error, defined as the "failure to establish an accurate and timely explanation of the patient's health problem or communicate that explanation to the patient", may occur at any point throughout this diagnostic process (4, 5). Globally, cancer is one of three diagnostic groups that predominate diagnostic error reports from primary care (4). A Primary Care Practitioner's (PCP) failure to order appropriate diagnostic tests, incorrect interpretation of test results, and the absence of an appropriate follow-up plan are common themes in these reports (6-8). Furthermore, minimising the time taken for test ordering, performance, interpretation, and communication in primary care is regarded as key to improving cancer outcomes by reducing the time to definitive diagnosis (9, 10).

Safety Netting is a diagnostic strategy used when necessary in primary care to ensure that patients are monitored throughout the diagnostic process until their symptoms or signs are explained (11). It is a construct that encompasses a broad range of behaviours including doctor-patient communication, clinician responsibilities, and system factors (11, 12). It is regarded as best practice to protect against an initially inaccurate working diagnosis but there is an absence of evidence on how best to safety net (13), especially in patients with non-specific symptoms that could be caused by cancer (11, 14). One area of uncertainty is to what extent patients should retain responsibility for follow-up actions before they are referred to specialist care (7, 15, 16). Patients may underestimate the significance of symptoms, hesitate to re-consult, concern about wasting the doctor's time or be unaware of their responsibility to follow-up investigations, sometimes wrongly assuming "no news is good news" (17-20). Opportunities to re-assess, communicate test results or take appropriate action may be missed (15). One strategy, therefore, could be for PCPs to retain more responsibility for follow-up.

The International Cancer Benchmarking Partnership Module 3 (ICBP3) surveyed PCPs in eleven international jurisdictions with varying cancer survival between May 2012 and July 2013 (10), and May to September 2014 in New Zealand (NZ) (21), to understand variations in primary care behaviour and practice (22-24). In this study, we aimed to explore internationally the extent to which PCPs retain responsibility for diagnostic follow-up, by describing the follow-up actions reported by PCPs in the ICBP3 survey. We also considered the UK in comparison to the other jurisdictions given the UK's relatively poor cancer outcomes.

Methods

The development of the ICBP3

survey is described in detail elsewhere (10, 23). Firstly, direct questions enquired about primary care practice in general. Secondly, clinical vignettes described patients presenting to primary care with a combination of symptoms and signs, each with a known risk of cancer, to investigate what follow-up action PCPs would choose (Appendix 1).

Retaining responsibility

For this secondary analysis we defined “retaining responsibility for follow-up during the diagnostic process” as situations in which the PCPs organised the next stage of the diagnostic process without a reliance on the patient to take action. Responses were categorised as: appointment follow-up, test reconciliation (making sure tests ordered were performed and results reviewed), test result communication, and follow-up for patients who did not attend (DNAs).

The four direct questions pertinent to this analysis are shown in Table 1: the * denotes responses that demonstrate that the PCP would retain responsibility. These responses were independently selected by two researchers (BDN, CB) whilst a third moderated any disagreements over selection (RP). For three of these questions, PCPs could select more than one option including a free text option. Where appropriate, and if not already selected by the PCP, two researchers (BDN, CG) reclassified free text responses into the pre-existing response categories.

During the vignettes, PCPs were asked to select one of five options about appointment follow-up if they chose not to order an investigation (Table 3). Of these, retaining responsibility included the PCPs arranging an appointment with the patient that was to be kept irrespective of improvement or worsening, or arranging an appointment with the patient to be cancelled if better. If PCPs chose to order an investigation they were asked to select one of five follow-up options to communicate the test results to the patient (Table 4). Of these, retaining responsibility included PCPs contacting the patient with all test results, or contacting the patient if results were abnormal.

Analysis

For each jurisdiction, the proportion of PCPs retaining responsibility in each direct question or vignette was weighted using the Freeman-Tukey double arcsine transformation to allow for variation in sample sizes (25). To identify factors that may contribute to the poorer cancer outcome observed in the UK, pooled estimates for the proportion of PCPs choosing to retain responsibility were compared for the three UK jurisdictions and their non-UK counterparts. A random effects meta-analysis was performed using the metaprop command in Stata. Pooled estimates were calculated, their 95% Wald confidence intervals, the I^2 statistic for heterogeneity, and the test of significance for differences between the UK and non-UK pooled estimates (25). A p-value of <0.05 was deemed statistically significant.

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139 All free text responses to the direct questions were analysed independent to the quantitative results, then used to
140 contextualise the quantitative findings. The free text data were translated and analysed thematically by employing
141 a modified grounded theory approach by two clinical researchers (CG and HT) (26). CG developed a coding scheme
142 based on the content of the free text responses and grouped codes into themes. HT independently coded the free
143 text responses, which confirmed and expanded the coding scheme. Data saturation was reached and quality and
144 rigour were further improved by discussing the coding scheme and emerging themes in relation to the quantitative
145 outcomes. Analysis was facilitated by NVivo 10 (QSR International Pty Ltd. Version 10, 2012).

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Results

A total of 2,879 PCPs from eleven jurisdictions (nine countries) completed the survey. The crude response rate for the main ICBP3 survey was 12% (jurisdiction-specific response rates are reported elsewhere (15)).

Follow-up appointment

There was wide variation in the degree PCPs retained responsibility for appointment follow-up across jurisdictions, ranging from 27% (New South Wales) to 93% (Sweden). There was no statistically significant difference between UK and non-UK jurisdictions (45% vs. 57%, $p=0.27$). However, more European PCPs (82% to 94%) retained responsibility than the UK PCPs (41% to 52%) (Table 2). In the vignettes, UK PCPs retained responsibility less for appointment follow-up when no test was requested, but the difference was significant only in lung cancer vignette four (35% vs. 58%, $p<0.001$) (Table 3).

From the qualitative analysis, we found that PCPs titrated their retention of responsibility to their level of concern (QUOTE A) and if they were concerned about a potential cancer diagnosis (or other serious pathology) they would arrange follow up at the time of the first appointment (QUOTE B). Patient reliability, general frailty or vulnerability also led some PCPs to book follow up appointments directly. A barrier for this was a restricted number of appointments that PCPs could book directly. In less concerning situations, PCPs often delegated responsibility to patients with specific instructions (QUOTE C). Some PCPs used easy access “walk-in” systems or “open surgeries” to safety net, which relied on patients taking responsibility to return.

Test Reconciliation

There was wide variation in the PCPs retaining responsibility for reconciliation of test results, ranging from 19% (Ontario) to 69% (Sweden) (Table 1). Fewer UK PCPs tended to do this overall compared to non-UK PCPs (27% vs. 39%, $p=0.07$) (Table 2). Reconciliation was reported to occur after the test result was sent to the PCP. Some PCPs described running audits to reconcile test requests with tests reports to ensure their patients had attended for testing and the laboratory had reported the results (QUOTE D).

If PCPs were particularly concerned about the patient, some reported keeping a separate record of this to ensure tests were performed and results acted on. PCPs described using digital and non-digital formats to do this (QUOTES E-G).

Test Communication

Significantly fewer UK PCPs reported retaining responsibility for test result communication compared to their non-UK counterparts (73% vs. 85%, $p=0.04$) (Table 2). In the vignettes, UK PCPs also retained responsibility less often for

183 patient follow-up after a test was requested (Table 4): this difference was significant in two vignettes (colorectal
184 cancer vignette 1 [25% vs. 45%, $p=0.02$]) and lung cancer vignette 3 [24% vs. 52%, $p=0.01$]) and marginally
185 significant in another (ovarian cancer vignette 5 [29% vs 45%, $p=0.05$]) (Table 4).

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187 Some PCPs described they would contact patients directly if an abnormal result was potentially serious or if a
188 patient was more vulnerable (QUOTE H). Some practices had systems in place that enabled administrative teams to
189 assist with the process of contacting patients, for example in one practice PCPs nominated the time interval in
190 which this should happen (QUOTE I). Other PCPs described using “results tags” or ran audits to check that patients
191 had been reviewed (QUOTE J). There is evidence of PCPs employing a strategy we have termed “double safety
192 netting” in which two methods of follow up are initiated, often simultaneously, to increase the likelihood of the
193 action being completed. For example, the PCP agrees an action (a telephone call) but at the same they also request
194 that the patient arranges a follow up appointment after the test has been performed (QUOTES K&L).

195 196 ***Follow-up of non-attenders (DNA's)***

197 Significantly fewer UK PCPs retained responsibility for the follow-up of non-attenders compared to non-UK PCPs
198 (78% vs 93%, $p<0.001$) (Table 2). Different strategies were used to follow up patients who did not attend
199 appointments. Some PCPs described how they kept a diary of patients they wished to see again. Double safety
200 netting was also used to ensure that patients who miss appointments were followed up. For example, the patient is
201 asked to book a review appointment and a recall is also added to a computer system, so that staff can ensure
202 follow up takes place (QUOTE M). PCPs based in jurisdictions where patients paid for appointment also included
203 patient recall information on the invoice (QUOTE N).

Discussion

We conducted a secondary analysis of data from an online survey on cancer diagnostics in primary care. Our results show substantial variation between jurisdictions in the level that PCPs retained responsibility for follow-up, ranging from 19-97% across jurisdictions and area of follow-up. There was most variation for appointment follow-up and test result reconciliation across jurisdictions, although UK PCPs retained responsibility significantly less than non-UK PCPs in the other two areas of follow-up: test communication and DNA follow-up.

The accurate, consistent and timely reconciliation of test results by PCPs and then the communication of results to the patient reduces the likelihood of diagnostic error and promotes timely and appropriate follow-up (18). Our results highlight that test reconciliation is inadequately performed and that test communication is dependent upon test reconciliation. This prevalent potential weakness in the diagnostic pathway, common to all jurisdictions, has the could leave patients vulnerable to missed opportunities for diagnosis.

Sociodemographic groups associated with delayed presentation to primary care are also more likely to DNA appointments (27-30). PCPs reported retaining responsibility more often for DNA follow-up than for appointments, test reconciliation, and test communication, yet significantly fewer UK PCPs report doing this. Structural differences in primary care may enable or prohibit PCP DNA follow-up (31). For example, our findings highlight that invoicing is used as an opportunity to formalise DNA follow-up and communicate follow-up intentions in systems with co-payment.

PCPs have developed bespoke, but inconsistent, and often manual solutions to test follow-up. In cases of greatest concern, additional contingencies for result communication are put in place, with for example the PCP agreeing to contact the patient whilst also asking them to contact the surgery for results. This doubling up of safety netting actions or “double safety netting” aims to increase the likelihood that the patient would return for follow-up. It could help to identify when tests are performed but not reported back to the PCP, but would fail if a test was not performed because the patient chose not to attend, or the test was not reported back to the surgery and the patient assumed “no news was good news” (32). Furthermore, responsibility for test communication was often directly delegated to non-clinical staff, and indirectly when patients were asked to contact the surgery for their results. The extent, acceptability, and safety of such strategies are under investigation in the UK (33).

Strengths and limitations

To our knowledge, this is the first study to document the extent to which PCPs retain responsibility for follow-up across international jurisdictions. We used data from a recent large validated international survey of PCPs developed by primary care cancer experts (23). The main limitations were: 1) variable sampling methods between jurisdictions; 2) the low survey response rate in some jurisdictions leading to concerns about the

representativeness of the PCP sample (10); 3) the uncertainty surrounding the responses about test follow-up in the fourth vignette (as demonstrated by the wide confidence intervals for the pooled estimates), although the variation in sample sizes was taken into account by the arcsine transformation; 4) the reliance on participant recall to document PCP practice, although direct observation would be unfeasible; 5) the risk that UK researchers have interpreted non-English free text responses incorrectly although the translation and interpretation has been corroborated by international co-authors; 6) and the observation that not all PCPs provided free text comments which were no substitute for carefully designed and purposively sampled qualitative research (34), however the free text responses in this survey contextualise the variability in follow-up identified in the quantitative analysis.

Comparison with existing literature

International differences in primary care cancer investigation (10), cancer guidelines (24), the centralisation of services, free movement of patients between providers, the existence of patient list systems, and secondary care access have already been elucidated by ICBP3 (31). Our findings add variations in systems for follow-up. Inadequate processes and variation in test follow-up, similar to those highlighted here across international jurisdictions, have been described in the UK (15, 18, 35, 36). In the US, Callen et al called for urgent action to: clarify the responsibility, timing and process of test notification; integrate information and communication technologies; and to consider the multidisciplinary nature of patient follow-up including the patient's role (37). Electronic Health Record (EHR) based triggers have been shown to increase the proportion of symptomatic patients who receive follow-up for suspected cancer (38-40), but substantial social and technical challenges exist for the adoption of innovation (41, 42).

Implications for research and/or practice

At present, our study shows that primary care relies upon individual practice and practitioner strategies to overcome weaknesses in systems for patient follow-up despite the availability of information technology and use of EHR in primary care (31). Due to a relatively low level of responsibility retained by PCPs for follow up in this study, the use of a "wait-and-see" follow-up strategy may lead to missed diagnostic opportunities (3, 7). This is to a large degree modifiable using procedures, information technology and supportive systems in EHR and could also include patient responsibilities (43). Given the great variability in safety netting practice reported by PCPs across and within jurisdictions, a clear implication for practice is for PCPs to evaluate the effectiveness of their individual approach to safety netting. In particular, to consider what safety netting means in their context, what led to their approach, which patients they follow-up and for what clinical scenario, and to identify factors that may prevent patients from receiving follow-up who may otherwise benefit from it.

At a systems level, research is required to understand the benefits and unintended consequences of automated EHR systems and to develop and evaluate standardised systems that routinely identify tests and investigations to be requested, performed and acted upon. At a practitioner level, research is required to understand how, and based on what information, PCPs construct the hierarchies of concern they use to titrate their approach to follow-

up; including when PCPs delegate this responsibility to staff and patients. “Double safety netting” has been described here for the first time and should be explored further, especially in at risk patient groups with high deprivation scores and comorbidity (44). As the workload in primary care is increasing (45) research is required to understand how health service reorganisation and new models of access affect strategies for patient follow-up (33, 46).

Conclusion

Using a survey of PCPs we have described marked international variation in approaches to patient and test follow-up in cancer diagnosis. The degree to whether a PCP retained responsibility for follow-up during the diagnostic process was dependent on their level of concern for the patient and the primary care system within which they operate. We describe “double safety netting” as a strategy warranting further investigation. EHR based systems to support patient follow-up are at present underutilised and research into their development, uptake, and effectiveness seems warranted.

286 **Table 1.** Proportion (%) of 2,879 PCPs responding to four direct questions about follow-up by jurisdiction. *Denotes PCP retaining responsibility

	UK			Non-UK							
				Europe			Canada		Australasia		
	Wal	NI	Eng	Den	Nor	Swe	Man	Ont	NSW	Vic	NZ
Total Respondents (n)	226	161	252	257	230	199	228	613	277	203	233
Follow-up appointments: “If you want a patient to return for a follow-up appointment, how do you book this appointment?”											
Arrange the appointment at the time of the first appointment (%)*	42	52	41	80	89	93	50	43	27	28	29
Ask the patient to book the appointment at the time of the first appointment (%)	59	46	65	42	20	13	54	57	78	82	64
Ask the patient to book nearer to the proposed time of the follow up appointment (%)	28	23	19	13	12	7	14	14	9	9	17
Leave it to the patient’s discretion (%)	9	11	9	1	1	3	6	9	4	2	11
Other (please describe below) (%)	10	6	7	3	3	9	6	6	5	3	7
Test reconciliation: “What system do you have to ensure that you receive the result of every test/investigation you order?”											
No system (%)	19	18	18	23	35	9	23	24	12	15	15
Automatically or manually record every test that is ordered and reconcile every test when the result is received (%)*	27	33	23	25	29	69	39	19	53	45	38
Automatically or manually record some tests that are ordered and reconcile them when the results are received (%)	22	20	21	26	24	14	21	36	23	28	40
Rely on patient to call or make an appointment for result (%)	31	31	37	46	14	4	24	29	17	17	10
Other (please describe below) (%)	18	14	18	17	11	12	11	12	10	6	9
Test communication: “What do you normally do to ensure that all tests/investigation results are followed up?”											
No system (%)	1	1	2	4	0	1	2	2	0	0	3
I receive the results and follow-up at my discretion (%)*	65	61	65	61	70	74	68	74	64	67	75
I ask the patient to call or make an appointment for the result (%)	54	55	60	60	16	7	37	38	54	62	20
I tell the patient I will contact them only if the result is abnormal (%)*	22	22	24	15	64	34	52	45	28	25	46
Other (please describe below) (%)	14	8	4	19	8	25	9	8	11	8	10
Follow-up of non-attenders: “If patients do not attend for scheduled follow-up appointments do you contact them?”											
Yes, routinely (%)*	6	6	6	11	15	23	17	21	35	25	23
Yes, selectively (%)*	70	65	79	79	78	70	73	70	61	72	73
No (%)	24	30	14	10	7	8	11	8	4	3	5

287 **Table 2.** *Proportion of PCPs in each jurisdiction retaining responsibility for follow-up during the diagnostic process in the four direct questions.*
288 Bold=significance level of p≤05.

PCP retains responsibility for:	UK			Non-UK								p-value
	Wales	Northern Ireland	England	Europe			Canada		Australasia			
				Denmark	Norway	Sweden	Manitoba	Ontario	New South Wales	Victoria	New Zealand	
Follow-up appointments (%)	42	52	41	80	89	93	50	43	27	28	29	0.27
% (95% CI)	44.7 (38.2-51.2)			56.7 (36.6-75.7)								
Test result reconciliation (%)	27	33	23	25	29	69	39	19	53	45	38	0.07
% (95% CI)	27.2 (22.0-32.8)			39.1 (27.5-51.4)								
Test result communication (%)	65	61	65	61	70	74	68	74	64	67	75	0.04
% (95% CI)	73.2 (65.0-80.7)			85.1 (76.9-91.8)								
Follow-up of non-attenders (%)	76	70	86	90	93	92	89	91	96	97	96	<0.001
% (95% CI)	77.7 (69.0-85.4)			93.4 (91.3-95.3)								

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290 **Table 3.** *Proportion of PCPs choosing to retain responsibility for patient follow-up when no test is requested, by vignette and jurisdiction.*
291 Bold=significance level of $p \leq 0.05$.
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	UK			Non-UK								p-value
	Wales	Northern Ireland	England	Europe			Canada		Australasia			
				Denmark	Norway	Sweden	Manitoba	Ontario	New South Wales	Victoria	New Zealand	
GP retains responsibility for follow-up when no test is requested (%)												
Colorectal cancer vignette 1	18	14	28	21	29	35	41	36	19	41	23	0.08
% (95% CI)	21.1 (13.5-29.8)			30.6 (24.1-37.5)								
Colorectal cancer vignette 2	38	0	43	12	22	80	45	27	25	50	67	0.51
% (95% CI)	22.5 (0.60-57.4)			33.7 (19.8-48.9)								
Lung cancer vignette 3	44	31	37	60	64	47	53	44	54	47	16	0.27
% (95% CI)	38.9 (30.1-48.0)			47.5 (35.4-59.7)								
Lung cancer vignette 4	36	31	35	63	43	46	69	60	71	69	35	<0.001
% (95% CI)	34.7 (27.0-42.8)			57.7 (47.9-67.3)								
Ovarian cancer vignette 5	20	5	38	28	35	31	39	43	35	48	23	0.18
% (95% CI)	20.6 (5.60-41.1)			34.7 (29.3-40.3)								

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294 **Table 4.** *Proportion of PCPs choosing to retain responsibility for patient follow-up after a test is requested, by vignette and jurisdiction*
295 Bold=significance level of $p \leq 0.05$.
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	UK			Non-UK								p-value
	Wales	Northern Ireland	England	Europe			Canada		Australasia			
				Denmark	Norway	Sweden	Manitoba	Ontario	New South Wales	Victoria	New Zealand	
GP retains responsibility for follow-up when a test is requested (%)												
Colorectal cancer vignette 1	18	24	30	15	70	79	51	48	23	20	57	0.02
% (95% CI)	24.9 (17.7-32.8)			44.8 (29.6-60.4)								
Colorectal cancer vignette 2	13	44	25	14	74	82	55	43	24	17	62	0.14
% (95% CI)	25.9 (10.5-45.1)			45.7 (27.8-64.3)								
Lung cancer vignette 3	23	29	22	13	77	83	66	60	23	25	69	0.01
% (95% CI)	23.6 (17.6-30.2)			51.7 (32.5-70.6)								
Lung cancer vignette 4	50	0	50	14	100	100	72	75	40	29	71	0.19
% (95% CI)	45.4 (15.3-77.0)			70.0 (44.1-91.0)								
Ovarian cancer vignette 5	25	30	31	13	66	59	51	57	26	22	73	0.05
% (95% CI)	28.5 (21.2-36.4)			45.2 (30.4-60.4)								

297

98 **Table 5. Illustrative quotations of coding themes from the free text analysis.**

<p>Titration of retention of responsibility to level of concern</p> <p>A) Depends on my level of concern - if concerned about patient, will book follow up when they are there for appt. If less concerned, may tell them to call if no resolution in symptoms - <i>PCP Ontario</i></p>
<p>PCP retains responsibility and arranges follow up themselves at the time of the first consultation</p> <p>B) If high index of suspicion of serious pathology I will book the follow-up, at other times I will ask the patient to go to reception and specify an interval for follow-up - <i>PCP Wales</i></p>
<p>PCP delegates responsibility of arranging follow up to colleague</p> <p>C) I give the patient a little note with the date I want to see the patient again, - then he gives it to my receptionist and gets an appointment. In that way I save my time and the patient gets the most appropriate time - <i>PCP Denmark</i></p>
<p>Audits/software used to monitor test reconciliation</p> <p>D) Computerised system flags unreconciled tests and these are reviewed - <i>PCP Canada Manitoba</i></p>
<p>PCP uses non-digital record of patients who require follow up or tests ordered</p> <p>E) I also learned to keep a written list of patients needing follow up so that if they do not return as expected, I can follow them up - <i>PCP England</i> F) I manually record tests ordered where I am concerned there might be serious pathology - <i>PCP Northern Ireland</i>.</p>
<p>PCP uses digital record of patients who require follow up or tests ordered</p> <p>G) PCP All consultations and diagnostic imaging and tests are recorded and reconciled with the exception of blood tests. If I am concerned about a patient I message myself in the EMR to confirm tests have been done within a specific time period – <i>PCP Ontario</i></p>
<p>PCP contacts patient directly if significantly abnormal result or patient vulnerable</p> <p>H) Significantly abnormal results will cause me to contact patient, but minor abnormalities aren't routinely followed up, unless patient known to be vulnerable - <i>PCP England</i></p>
<p>PCP delegates (through administrative system) contacting patients about test results</p> <p>I) I put a recall on the result and mark it urgent (within 24 hours), semi urgent (within 7 days) or non-urgent (within 3-4 weeks). I depend on the administrative assistant to do the recall - <i>PCP Manitoba</i></p>
<p>Audits/software used to check that abnormal results have been followed up</p> <p>J) Our admin staff check the results and doctors comments monthly - any abnormal results asked to 'see or speak to doctor' not been acted on - we send a letter to the patient asking them to contact us - <i>UK Wales</i></p>
<p>Double Safety-Netting (test communication)</p> <p>K) Normally a follow up physician appointment is booked, but I am also asking the patient to phone, i.e. doubled safety - <i>PCP Denmark</i> L) I usually call the patient when the results are available but also tell her at the initial appt that she is to come in for an appointment within two weeks of having the testing done if she does not hear from me – <i>PCP Canada</i></p> <p>Double Safety-Netting (follow up appointment)</p> <p>M) I ask the patient to book with reception for a review appointment within a specified time frame (e.g. come back in 6w). I add a recall into our software system to remind myself that they are due to return for results and I or staff will contact them if they do not attend in the time frame advised - <i>PCP Victoria</i></p>
<p>Request for follow up appointment noted in invoicing software</p> <p>N) Generally I tell the patient the time frame and I note that in the billing information sent to reception - <i>PCP New South Wales</i></p>

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24 Australia). Academic Reference Group: Jon Emery, Professor of Primary Care Cancer Research, University of
25 Melbourne and Clinical Professor of General Practice, University of Western Australia, Australia. Niek de Wit,
26 Professor of General Practice, Julius Centre for Health Sciences and Primary Care, University Medical Centre,
27 Utrecht, The Netherlands. Roger Jones, Editor, British Journal of General Practice and Emeritus Professor of General
28 Practice, King's College, London, UK. Jean Muris, Associate Professor in Family Medicine, Maastricht University, The
29 Netherlands. Frede Olesen, Professor, Research Unit for General Practice, Department of Public Health, University
30 of Aarhus, Denmark.

31
32 **Collaborators Module 3 Working Group**—Andriana Barisic, Research Associate, Department of Prevention and
33 Cancer Control, Cancer Care Ontario, Toronto, Ontario, Canada. MD, Head, Department of Family Practice,
34 University of British Columbia, Vancouver, British Columbia, Canada. Diana Dawes, Research Associate, Department
35 of Family Practice, University of British Columbia, Vancouver, British Columbia, Canada. Mark Elwood, School of
36 Population Health, University of Auckland, Auckland, New Zealand. Kirsty Forsdike, Senior Research Assistant,
37 Department of General Practice, Carlton Victoria, Australia. Eva Grunfield, Director, Knowledge Translation
38 Research Network Health Services Research Program, Ontario Institute for Cancer Research; Professor and Vice
39 Chair Research Department of Family and Community Medicine, University of Toronto, Toronto, Ontario, Canada.
40 Nigel Hart, Clinical Senior Lecturer, School of Medicine, Dentistry and Biomedical Sciences—Centre for Public
41 Health, Queen's University Belfast 2013, UK. Breann Hawryluk, Project Planning Coordinator, Department of
42 Patient Navigation, Cancer Care Manitoba, Winnipeg, Manitoba, Canada. Gerald Konrad, Associate Professor,
43 Department of Family Medicine, University of Manitoba Winnipeg, Manitoba, Canada. Anne Kari Knudsen,
44 Administrative leader, Department of Cancer Research and Molecular Medicine, Norwegian University of Science
45 and Technology, Trondheim. Magdalena Lagerlund, Department of Learning, Informatics, Management and Ethics,
46 Karolinska Institute, Stockholm, Sweden. Claire McAulay, Research Officer, Public Health, School of Public Health,
47 D02-QE11 Research Institute for Mothers and Infants, University of Sydney Australia. Jin Mou, Postdoctoral Fellow,
48 Department of Family Practice, Research Office, Department of Family Practice, University of British Columbia,
49 Vancouver, British Columbia, Canada. Richard Neal, Professor of Primary Care Medicine and Director, North Wales

50 Centre for Primary Care Research, Bangor University, Wrexham Technology Park, Wrexham, UK. Marie Pirotta,
51 Primary Health Care Research Evaluation and Development Senior Research Fellow, Department of General
52 Practice, Carlton Victoria, Australia. Jeffrey Sisler, Associate Dean, Division of Continuing Professional Development
53 and Professor, Department of Winnipeg, Manitoba, Canada. Berit Skjødeberg Toftegaard, PhD Clinical Researcher
54 Family Medicine, University of Manitoba, ch Fellow, Research Unit for General Practice, Department of Public
55 Health, Aarhus University, Bartholins Allé 2, Aarhus C, Denmark. HT, Associate Professor, Lund University, Lund,
56 Sweden. Peter Vedsted, Professor, Research Unit for General Practice, Department of Public Health, Aarhus
57 University, Bartholins Allé 2, Aarhus C, Denmark. David Weller, James Mackenzie Professor of General Practice,
58 Centre for Population Health Sciences, University of Edinburgh, Medical Quad Teviot Place, Edinburgh, UK. Jane
59 Young, Professor in Cancer Epidemiology, Public Health, School of Public Health, D02-QE11 Research Institute for
60 Mothers and Infants, The University of Sydney, Australia.
61

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64

65 **Appendix 1. ICBP3 survey clinical vignettes**

66 **Vignette 1 – colorectal cancer**

67

68 You are consulted by a 43 year old woman with a previous diagnosis of diarrhoea predominant Irritable Bowel
69 Syndrome for 10 years treated with Mebeverine 135mg three times daily (tds) when she is symptomatic. She
70 presents saying her IBS [Irritable Bowel Syndrome] is worse. On further questioning she has increased colicky
71 abdominal pain every day, but not at night. Her bowel habit is unchanged. She has taken her Mebeverine 135mg
72 tds regularly, but its not helping as much as usual. There are no other GI symptoms and no weight loss. She says her
73 periods are regular (LMP 2 weeks earlier) but not heavy and they last 5 days. No family history of Cancer.

74

75 **Vignette 2 – colorectal cancer**

76

77 A 68 year old man comes to see you. He has no relevant past medical history of note, and is on no medication. He
78 complains of loose stools twice each day most days for the last four weeks. He has had no recent travel or contact
79 with illness. There is no other relevant clinical history including normal appetite and no weight loss. Examination
80 including rectal exam is normal

81

82 **Vignette 3 - lung cancer**

83

84 A 68-year-old female consults you. She is mildly hypertensive, well controlled (BP 140/90) on Ramipril 5mg once
85 daily for two years. She smoked 20 cigarettes a day for 30 years but stopped 2 years ago. She has coughed most
86 mornings for at least 2 years, but for the last 3 weeks, following an upper respiratory tract infection, she has
87 coughed more, and the cough persists throughout the day. She is coughing up some sputum but there is no
88 haemoptysis. She has no other chest symptoms and no weight loss. Ear, nose and throat (ENT/OTL) and chest
89 examination is normal.

90

91 **Vignette 4 - lung cancer**

92

93 You are consulted by a 62 year old male smoker with COPD diagnosed by spirometry 2 years previously. He has
94 smoked 20 cigarettes a day for over 40 years. His current medication is Tiotropium inhaler 1 puff daily and
95 salbutamol inhaler for use as required. There is no other relevant past medical history. He presents with a one
96 week history of an Upper Respiratory Tract Infection with increased sputum production and increased use of his
97 inhaler. On examination he is not cyanosed, has a normal respiratory rate but he has some crepitations at the left
98 base and some upper lobe wheeze (rhonchi) bilaterally.

99

00 **Vignette 5 - ovarian cancer**

01

02 A 53 year old woman, whose last period was 6 months ago, presents to you with a history of new colicky lower
03 abdominal pain R>L for 3 weeks. She has no vaginal or urinary symptoms. She has had the same sexual partner for
04 20 years. She has had no change in the frequency or consistency of her stools. She is a frequent attender often with
05 complaints which remain undiagnosed. Abdominal examination is normal.

06