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Incentivised case finding for depression in patients with chronic heart disease and diabetes in primary care: an ethnographic study

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3 **Incentivised case finding for depression in patients with chronic heart disease and**
4 **diabetes in primary care: an ethnographic study**
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Abstract

Objective.

To examine the process of case-finding for depression in people with diabetes and coronary heart disease within the context of a pay-for-performance scheme.

Design

Ethnographic study drawing upon observations of practice routines and consultations, debriefing interviews with staff and patients, and review of patient records.

Setting

General practices in Leeds, United Kingdom.

Participants.

Twelve purposively sampled practices with a total of 119 staff; 63 consultation observations; and 57 patient interviews.

Main outcome measure.

Audio-recorded consultations and interviews along with observation field notes were thematically analysed using a constant comparison and contrastive approach. We assessed outcomes of screening from patient records.

Results.

Case-finding exacerbated the discordance between patient and professional agendas, the latter already dominated by the need for a tightly structured and time-limited interaction to document performance. Professional beliefs and abilities affected how case-finding was undertaken; there was uncertainty about how to ask the questions, particularly amongst nursing staff. Professionals were often wary of opening an emotional “can of worms.” Subsequently, patient responses potentially suggesting emotional problems could be

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3 prematurely shut down by professionals. Screened patients did not understand why they
4 were asked questions about depression. This sometimes led to defensive or even defiant
5 answers to case-finding. Follow up of patients highlighted inconsistent systems and lines of
6 communication for dealing with screened positive cases.
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10 11 *Conclusions.*

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14 Case-finding does not fit naturally within consultations; both professional and patient
15 reactions somewhat subverted the process recommended by national guidance. Quality
16 improvement strategies will need to take account of our results in two ways. First, despite
17 their apparent simplicity, the case-finding questions are not consultation-friendly, and
18 acceptable alternative ways to encourage raising the issue of depression need to be
19 supported. Second, practice teams need clearer guidance on the pathway for people with
20 likely depression which can be accommodated within available systems and resources.
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30 **Strengths and limitations of this study**

31 32 **Strengths**

- 33 • Multi-site ethnography of typical general practices
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- 35 • Triangulation through use of multiple sources of data
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40 41 **Limitations**

- 42 • Potential for clinician and patient behaviour to alter as a response to being observed
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- 44 • Short periods of observation in each practice limiting range of types of behaviour
- 45 observed
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- 48 • Observations within one geographical area, thereby potentially limiting
- 49 generalisability
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Introduction

The detection and management of depression associated with chronic physical illness represents a major challenge for primary care. Depression affects around a third of people with coronary heart disease (CHD) and a quarter of those with diabetes [1-4]. Such co-morbidity can make depression hard to recognize, especially as symptoms of depression (such as fatigue) overlap with those of chronic physical illnesses [5]. Co-morbidity is also associated with poorer outcomes, including mortality. [3 6 7] One response is case finding, screening for depression in populations at high risk, such as those with chronic illness. This has been recommended by national guidance in the UK [8] and elsewhere. [9 10]. The Quality Outcomes Framework (QOF), a pay-for-performance scheme in UK primary care, rewarded depression case finding using two standard screening questions from the Patient Health Questionnaire-2 (PHQ-2) in all patients with coronary heart disease (CHD) or diabetes [11]. The PHQ-2 asks: In past 2 weeks, have you been bothered by: Little interest or pleasure in doing things; and feeling down, depressed or hopeless?[12] Routine data suggested high levels of screening, with a national average of 86% of eligible patients screened in 2011-12 [13].

However, there are problems with both the rationale underpinning this recommendation and the means undertaken to promote its implementation in the UK.

Firstly, there is no evidence that screening for depression by itself improves patient outcomes [14]. For screening to be effective it is important that case finding-detected cases are further assessed, diagnosed and offered appropriate clinical management within a structured clinical pathway [15-17]. There is no closely allied incentive in the QOF programme for subsequent patient care.

Secondly, evidence on the effects of financial incentives on primary care practice is, at best, mixed [18-20]. There are concerns that such incentives undermine professionals' intrinsic motivation, patient-centeredness, and continuity of care and have led to a 'tick box' culture

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3 as health professionals work through checklists for chronic illness management [19 21-23].
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5 Health professionals themselves have expressed dissatisfaction with incentivised depression
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7 management [24 25].
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10 Our accompanying interrupted time series analysis found that incentivised case finding
11
12 increased new depression-related diagnoses in people with diabetes and CHD and
13
14 perpetuated rising trends in new prescriptions of antidepressants. [26]. Even though this
15
16 incentivised case finding stopped in 2012, there are continuing calls for 'something to be
17
18 done' to detect and treat depression in high risk groups [27-29]. However, the professional
19
20 and patient experiences of incentivised case finding, how it affected clinical care, and its fit
21
22 with the routines of practice life are poorly understood. We investigated the process of
23
24 incentivised case finding during scheduled and opportunistic reviews of patients with
25
26 diabetes and CHD.
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30 **Methods**

31 *Design and setting*

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33 Our ethnographic design combined direct observation with interviews and review of patient
34
35 records. We wanted to build an in-depth understanding of how patient case finding was
36
37 conducted within the context of everyday practice life and routine patient care. The study
38
39 took place in general practices in Leeds, UK.
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43 *Participants*

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45 We invited all practices in Leeds to participate. We then sought a purposive sample of
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47 practices using a four-by-two sampling frame based upon whether practice QOF
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49 achievement was above or below the Leeds median, further stratified by list size and
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51 deprivation profiles. Practices that consented to participate were booked for a week of
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53 observation, during which we aimed to observe at least three consultations.
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3 Practices sent letters of invitation and information packs to patients scheduled for chronic
4 disease reviews within the observation week. We also approached patients attending for
5 routine consultations to enable observation of opportunistic case finding. Practice staff
6 identified patients due to be asked the case finding questions and asked if they would be
7 interested in participating when they arrived at reception for their appointment. All patients
8 and professionals subsequently observed gave informed consent.

15 *Data collection and analysis*

16
17 An ethnographer (AR) used a funnelling approach to observe and describe the context of
18 and behaviours within the practice [30], moving to detailed observation and audio-recording
19 of consultations. Observation considered both verbal and non-verbal features including: how
20 case finding questions are framed and asked; events leading up to questioning; patient
21 verbal and non-verbal reactions and responses; and overall style of the consultation. This
22 style of observation allowed the researcher to layer the analysis of the consultations with
23 contextual information providing a richer interpretation of the observation data. She held
24 semi-structured debriefing interviews with patients who had been observed being screened.
25 The interviews aimed to explore patient views on the process and experience of the
26 consultation in further depth. We reviewed patients' medical records six weeks after
27 observed screening to check for any subsequent clinical events related to depression
28 identification and management.

29
30 The perceived relative importance and organisation of QOF-related case finding may vary
31 throughout the year. To partly ameliorate this we observed two practices towards the end of
32 the financial year when practices are typically working hardest to achieve QOF targets.

33
34 Transcribed data (interviews, observation transcripts and observation notes) were managed
35 using NVivo9 and coded for themes. Thematic analysis was undertaken by two researchers,
36 independently coding for the themes and then comparing codes and themes. The analysis
37 was further refined by using constant comparison and contrastive approach, and looking for
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3 negative cases in order to examine for similarities and differences within and between the
4 patients' perception and observations in different centres. Finally, to improve reliability and
5 validity of data, we triangulated findings from all three data sources.
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9 10 *Ethical review*

11 The study was approved by National Research Ethics Service Committee South West –
12 Exeter (11/SW/0335).
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15 16 17 18 **Results**

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20 Twelve practices participated and a total of 63 patient consultations were observed (range 2-
21 13 per practice; Table 1). Practice characteristics were relatively balanced, with five having
22 QOF achievement above the median for Leeds, five above median population deprivation
23 scores, and six above median list size. Patients were mostly commonly male, age 51-79
24 years, and white British (Table 2). Most (79%) participants had diabetes and nine (14%) had
25 a previous diagnosis of depression. Nine of the observed case findings took place
26 'opportunistically' within routine GP appointments. The rest occurred within dedicated
27 chronic disease clinics, usually with nurses.
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31 Six key themes emerged: discordance between patient and professional agendas;
32 professional beliefs affecting how screening was undertaken; case-finding as opening a "can
33 of worms"; patient existential beliefs affecting their responses; case finding as a means to
34 reduce stigma; and practice priorities and organisation.
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37 38 39 40 41 42 43 44 45 46 *Discordance between patient and professional agendas*

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48 Case finding exacerbated the discordance between the patient and professional agendas,
49 the latter already dominated by the need for a tightly structured and time-limited interaction
50 to document QOF processes. This led to professionals disregarding attempts by patients to
51 steer the consultation around to their own perceived needs. Patients were often not focused
52 on the review process and used the consultation as an opportunity to raise other problems.
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3 Professionals often interrupted patients or returned the consultation to its purpose,
4 discounting clues that the patient had worries related to the chronic disease being reviewed
5 or other illnesses.
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10 Patient: [talking about hypoglycaemic attacks] *Only time that I went funny, I had a*
11 *tooth out and I'd had, I couldn't have any breakfast, or I didn't have any breakfast,*
12 *because I don't like to be poorly when I've had teeth out, because I used to be when I*
13 *was younger, am I talking and disturbing....*
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19 [Fieldnote] Nurse is trying to measure blood pressure; patient looks agitated.
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22 Nurse: *Yes, I think you just probably need to just be quiet for a couple of minutes*
23 *while I check it, because it's even higher now! We want it to go down! Just try and*
24 *relax. OK. Observation 29*
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29 At this stage in the consultation the patient became distressed, apparently wishing to discuss
30 further their worries about hypoglycaemia. This illustrates the restrictive context of disease
31 reviews – in this case hampering further exploration of patient concerns that might have
32 uncovered associated mood problems.
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36 37 *Professional beliefs affecting how the case finding was approached*

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39 Professional beliefs and abilities affected how case finding was undertaken. They
40 expressed uncertainty about how best to phrase and ask the questions, particularly nursing
41 staff who sometimes felt insufficiently trained on how to manage patients who screened
42 positive. They questioned whether they were case finding for QOF rather than patient benefit.
43
44 Professionals avoided directly asking screening questions if they were familiar with patients
45 but still recorded case finding; they believed could identify mood changes through existing
46 knowledge of patients. They often adapted the questions to suit their consultation style or
47 perceived patient needs.
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3 Nurse: *Then so do you feel ok about your diabetes, do you have any, do you worry*
4 *about it, does it bother you at all?* Observation 27
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8 Field notes Practice A: [The nurse] referred to QOF as coming from “on high” to tell her
9 to incorporate it [case-finding]. She felt depression screening was problematic as they
10 had received “no training” in mental health or in screening and they were very
11 “stretched for time in the appointment.”
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15 16 17 *Opening a “can of worms”*

18
19 Professionals at nearly every practice mentioned the term “can of worms” to express unease
20 with case finding for depression. This metaphor indicated professional perceptions of both
21 patient discomfort with being asked about emotions and their own emotional labour in asking
22 the questions. “Can of worms” helped articulate the belief that case finding for depression
23 was anticipated as a problematic part of the consultation and threatened to derail routines.
24 Professionals anticipated having to manage and close down answers before patients began
25 to give them; this often informed their immediate response to patients’ answers regardless of
26 what patients said. Patients seldom answered with a simple “yes” or “no” and brought up
27 specific difficulties, such as bereavement. Following an initial acknowledgement,
28 professionals then tended to move consultations on without discussing the effects of these
29 life events on mood. Therefore, professionals prematurely shut down patient responses
30 suggesting emotional problems to reduce the risk of extended consultations.
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44 Nurse: *Are you alright, you haven’t been having little interest in doing things, or?*

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46 Patient: *No, no.*

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48 Nurse: *Are you fine, are you okay? That’s okay.*

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50 Patient: *It’s been 10 years since I’ve lost [woman’s name].*

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52 Nurse: *Is it, what, is that your wife?*

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54 Patient: *Yes.*
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3 Nurse: 10 years? That's a long time, isn't it? Can I just check your tablets then, do
4 you take aspirin, [lists medication]... Observation 23
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8 *Patient existential beliefs affecting responses*

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10 Many patients screened did not see themselves as the type of people who would be prone to
11 depression and did not understand why they were asked. This sometimes led to defensive or
12 even defiant answers, or deflecting questions with humour.
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17 Nurse: *So during the past month have you been bothered by feeling down or*
18 *depressed or hopeless at all?*
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20 Patient looks perplexed.
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22 Patient: *I'm always...* (His voice cracks and pretends to cry and rub his eyes like a
23 child) *Am I heck!*
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27 Fieldnote: Nurse shuffles in her seat and leans forward. She's smiling but not 100%
28 comfortable. Observation 24
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32 Interviewed patients articulated the belief that the professionals would pick up mood
33 problems or not coping without the need for such questions. They felt being aware of
34 depression was important in a generalised context but it did not fit with who they were, and
35 so found it hard to understand in the context of a chronic disease review.
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41 *Case finding as a means to reduce stigma*

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43 Patients and professionals often considered that regular discussions around mood and
44 depression helped to reduce associated stigma. Patients were mostly unaware of the
45 increased prevalence of depression in chronic illness, although felt they understood why it
46 might occur. They suggested that introducing the case finding questions following an
47 explanation that depression was more common in chronic illness might facilitate disclosure;
48 this rarely happened in practice.
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3 Researcher: *So when the nurse asks you about your mood... just like I'm trying to*
4 *imagine your perspective, why do you think that she's asking these questions*
5 *usually when you get asked?*
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10 Patient: *I don't know really, I didn't know whether it was because of my history [of*
11 *depression] or... I didn't realise that people with heart problems and diabetes get*
12 *depressed. I suppose if you're not well or you've got on going things with you, I*
13 *suppose it can depress you."* Interview 44
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19 *Practice priorities and organisation*

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21 Practices varied in how they prioritised and organised case finding for depression. Some
22 practices devoted a lot of time and energy whilst others considered that some elements of
23 QOF, such as the depression indicators, required too much effort for too little gain.
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28 Field notes, Practice B: This leads to a debate over the decision between QOF
29 payments and the work put in to achieve those payments. GPs are saying they
30 should "choose their battles."
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35 Five out of 63 patients screened positive; practices subsequently acted on one of these.
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37 Two patients who screened negative subsequently consulted to seek help for mood
38 problems. Our follow up highlighted inconsistent systems and lines of communication within
39 practices for dealing with screen-positive patients. Although GPs were aware that nursing
40 staff undertook case finding, many did not know how a positive screen would be
41 communicated to them. Nurses assumed that GPs reviewed the case finding outcome when
42 seeing patients following reviews but this was seldom the case. For example, one patient
43 who screened positive was asked to return a PHQ9 which indicated moderate depression
44 symptoms. This was filed without notification to a GP and only picked up on our clinical
45 record review.
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3 Field notes, Practice J: I ask how many patients haven't been screened for
4 depression in the last 15months. No one knows how to find this out (including the
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6 Practice Manager and the IT guy).
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10 Discussion

11 Case finding for depression did not naturally fit within primary care consultations. It
12 appeared to augment discordance between professionals and patients. Professionals
13 struggled to align case finding with a person-centred approach and were wary of the risk of
14 patients' emotional issues derailing routine reviews. Professionals believed it was good to
15 ask about mental health but disliked the structure of the PHQ-2 and feeling forced to add it to
16 consultations. They subsequently responded by going 'off script' or discounting cues.
17 Patients sometimes did not understand why the case finding questions were being asked, or
18 did not see themselves as the type of people prone to depression. This led to defensiveness
19 or even defiance in their responses, especially if not anticipated as part of their review.
20 Practice responses to case finding outcomes were haphazard, which may have reflected
21 professional ambivalence towards depression case finding and the available treatment
22 options for those identified as having depression.
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38 Case finding for depression exemplifies what happens when attempts are made to fit
39 apparently straightforward but deceptively complex interventions into primary care
40 consultations and systems. Much has been written about how QOF checklist approaches
41 have disrupted consultation flows and led to the patient agenda being unheard [31-34]. This
42 is part of a wider phenomenon. For example, Rousseau *et al* demonstrated how a set of
43 computerised prompts conflicted with established consultation processes [35]. Such
44 experience highlights the need for systematic development and evaluation of such
45 interventions to ensure acceptability and feasibility before wider roll-out [36]. Despite their
46 apparent simplicity, our study has shown that depression case finding questions were not
47 implemented consistently within consultations and practice routines.
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3 Our findings also help explain the lack of benefit of case finding when it is implemented
4 outside of collaborative care models [14]. We identified mixed attitudes towards case finding
5 amongst both professionals and patients, coupled with the absence of agreed pathways for
6 patient follow-up and management.
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11 Study limitations mainly related to the nature of our observations, and sampled practices.

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13 We were aware of the intrusive nature of observation and the likelihood that people behaved
14 differently when under observation. For example, professionals may have made more of an
15 effort to ask the PHQ2 questions sensitively, or ask them at all. When possible, observation
16 began following a period of familiarisation to allow the healthcare professional to grow used
17 to the researcher's presence. A week may also be insufficient to fully understand all practice
18 processes and relationships; however, similar approaches have produced substantial
19 insights into healthcare organisational behaviour elsewhere [37]. Even allowing for these
20 limitations, it is striking how often professionals did deviate from recommended practice.
21
22 Professionals and patients are often used to the presence of a third party during
23 consultations for training purposes, although some of the nurses observed did comment on
24 feeling under pressure to demonstrate that they were following procedures correctly.
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31 The generalizability of our findings may be limited given that this study took place within one
32 geographical area. However, Leeds is typical of UK cities in terms of social deprivation
33 indices, demographics, characteristics of primary care services and distribution of common
34 diseases such as CHD and diabetes [38]. Furthermore, we sampled a relatively diverse
35 range of practices. Opportunistic case findings were under-represented in our sample of 63
36 consultations but we did not find any systematic differences from chronic disease review
37 case findings in our analysis.
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52 We identified a range of problems with incentivised screening for depression. Our
53 accompanying interrupted time series analysis indicates that incentivised case finding did
54 change clinical behaviour, increasing new depression-related diagnoses and, compared with
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3 untargeted patients with chronic illness, perpetuated increasing rates of antidepressant
4 prescribing [26]. It is difficult to predict with any confidence whether greater changes would
5 have occurred if case finding had been applied with greater fidelity. However, our findings
6 have broader implications for efforts to improve detection of depression in people with
7 chronic illness.
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11 Specifically, all of patients, professionals and healthcare systems need to be prepared in
12 advance of case finding. Firstly, for patients, experience with the diagnostic disclosure of
13 illnesses such as dementia and cancer suggests that acceptance is facilitated by a series of
14 negotiated steps rather than a 'one-off' process [39 40]. For example, patients in our study
15 indicated they would have been more receptive to case finding had they received information
16 beforehand about the higher prevalence of depression in chronic physical illness. It is also
17 possible that the act of case finding does form an initial step in helping patients consider and
18 come to terms with a diagnosis of depression, given that we found screen negative patients
19 subsequently consulted with mood problems. Secondly, professional attitudes towards and
20 skills required in the detection of depression need to be examined. Some voiced unease
21 about whether they were incorporating the questions correctly within consultations or
22 uncertainty about how to handle potential new diagnoses, particularly nursing staff. Thirdly,
23 resources and care pathways need to be optimised to accommodate detection and follow up.
24 Those who screen positive are more likely to have mild-moderate rather than severe
25 depression and less likely to benefit from antidepressant treatment [41 42]. Resources are
26 needed to manage those identified through case finding recommended by clinical guidelines.
27 Health professionals were understandably reluctant to open up a "can of worms" during
28 tightly restricted chronic illness reviews; the exploration of sensitive issues requires greater
29 flexibility in consultation time. We also found instances where screen-positives were not
30 acted upon given the absence of explicitly agreed pathways within practices.
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55 There are more general lessons beyond depression detection. Mood disorders are not the
56 only sensitive issue raised during chronic illness reviews. Our findings should prompt a
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reappraisal of how such reviews are designed and implemented for other emotionally-laden problems integral to chronic illness care, such as weight management, sexual dysfunction and alcohol misuse [43]. Health professionals may welcome structured protocols to help ensure coverage of key issues; there is evidence that prompting interventions have a small to modest effect on practice and patient outcomes [44]. However, such approaches have been less successful in addressing relatively complex clinical behaviours, especially for chronic illness management [45]. The subsequent challenge for quality improvement programmes and research is to further explore and evaluate how to develop interventions which can be embedded within primary care systems and consultations to improve population outcomes whilst preserving patient-centred care.

Incentivised case finding exacerbated tensions between perceived patient centredness and the time-limited routine of the consultation. Both professionals and patients reacted to the imposition of case finding by adapting, or even subverting, the process recommended by national guidance. Despite their apparent simplicity, the case finding questions are not consultation-friendly, and acceptable alternative ways to raise mood disorders merit further exploration. Practice teams need clearer guidance on the pathway for people with likely depression which can be accommodated within available systems and resources.

What is already known on this topic
<ul style="list-style-type: none">• Case-finding for depression was incentivised in UK primary care to increase depression diagnosis and management.• Evidence that case-finding has improved depression outcomes is lacking and health care professionals have expressed dissatisfaction with its implementation.
What this study adds
<ul style="list-style-type: none">• Patients and health care professionals subverted the standardised process of depression case-finding to suit their consultation style and needs.

- Practices need clear guidance on how to include mental health discussions within consultations and pathways for those identified as through case-finding.

Ethics Approval

This study was approved by the South West - Exeter Research Ethics Committee (reference 11/SW/0335). The participants gave informed consent before taking part.

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Transparency Declaration

Dr Sarah L Alderson, the lead author (the manuscript's guarantor), affirms that the manuscript is an honest, accurate, and transparent account of the study being reported; that no important aspects of the study have been omitted; and that any discrepancies from the study as planned have been explained.

Data sharing statement

Data sharing: no additional data available.

Contributorship Statement

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2
3 RF and AH conceived the project. RF was principal investigator. SA and KM designed the
4 study. SA and AR were responsible for running the project. AR was responsible for data
5 collection. All authors interpreted the data and findings. SA wrote the first draft of the
6 manuscript. RF commented on the first draft and all authors commented on further revisions.
7
8 SA is guarantor of the paper.
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13 14 **Competing interests**

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18 study.
19
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21 **References**

- 22
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24 1. Goldney RD, Phillips PJ, Fisher LJ, Wilson DH. Diabetes, Depression, and Quality of Life. *Diabetes*
25 *Care* 2004;**27**(5):1066-70 doi: 10.2337/diacare.27.5.1066[published Online First: Epub Date]].
26
27 2. Rudisch B, Nemeroff CB. Epidemiology of comorbid coronary artery disease and depression.
28 *Biological Psychiatry* 2003;**54**(3):227-40
29
30 3. Carney RM, Freedland KE, Miller GE, Jaffe AS. Depression as a risk factor for cardiac mortality and
31 morbidity: A review of potential mechanisms. *Journal of Psychosomatic Research*
32 2002;**53**(4):897-902
33
34 4. Anderson RJ, Freedland KE, Clouse RE, Lustman PJ. The Prevalence of Comorbid Depression in
35 Adults With Diabetes: A meta-analysis. *Diabetes Care* 2001;**24**(6):1069-78 doi:
36 10.2337/diacare.24.6.1069[published Online First: Epub Date]].
37
38 5. Simon GE, VonKorff M. Recognition, management, and outcomes of depression in primary care.
39 1995(2):99-105
40
41 6. Barth J, Schumacher M, Herrmann-Lingen C. Depression as a Risk Factor for Mortality in Patients
42 With Coronary Heart Disease: A Meta-analysis. *Psychosom. Med.* 2004;**66**(6):802-13 doi:
43 10.1097/01.psy.0000146332.53619.b2[published Online First: Epub Date]].
44
45 7. Katon W, Ciechanowski P. Impact of major depression on chronic medical illness. *Journal of*
46 *Psychosomatic Research* 2002;**53**(4):859-63
47
48 8. National Institute of Clinical Excellence. Depression in adults with a chronic physical health
49 problem: treatment and management. NICE. : NICE, 2009.
50
51 9. New Zealand Guidelines Group. Identification of Common Mental Disorders and Management of
52 Depression in Primary Care. An Evidence-based Best Practice Guideline. Wellington, 2008.
53
54 10. US Preventative Services Task Force. Screening for Depression in Adults: U.S. Preventive Services
55 Task Force Recommendation Statement. *Annals of Internal Medicine* 2009;**151**(11):784-92
56 doi: 10.1059/0003-4819-151-11-200912010-00006[published Online First: Epub Date]].
57
58 11. University of Birmingham and University of York Health Economics Consortium. NM49 indicator
59 development feedback report 2012.
60
12. BMJ Best Practice. Screening: Patient Health Questionnaire-2 (PHQ-2). BMJ Best Practice 2010.
<http://bestpractice.bmj.com/best-practice/monograph/55/prevention.html>.
13. Health and Social Care Information Centre. Quality Outcomes Framework 2012/13 results.
Secondary Quality Outcomes Framework 2012/13 results 2013.
<http://qof.hscic.gov.uk/index.asp>.

14. Gilbody S, Sheldon T, House A. Screening and case-finding instruments for depression: a meta-analysis. *Canadian Medical Association Journal* 2008;**178**(8):997-1003 doi: 10.1503/cmaj.070281[published Online First: Epub Date]].
15. Dowrick C, Buchan I. Twelve month outcome of depression in general practice: does detection or disclosure make a difference? *BMJ* 1995;**311**(7015):1274-76
16. Gilbody SM, House A, Sheldon T. Screening and case finding instruments for depression [Systematic Review]. *Cochrane Database of Systematic Reviews* 2009;**3**:3
17. Pignone MP, Gaynes BN, Rushton JL, et al. Screening for Depression in Adults: A Summary of the Evidence for the U.S. Preventive Services Task Force. *Annals of Internal Medicine* 2002;**136**(10):765-76 doi: 10.7326/0003-4819-136-10-200205210-00013[published Online First: Epub Date]].
18. Serumaga B, Ross-Degnan D, Avery A, et al. Effect of pay for performance on the management and outcomes of hypertension in the United Kingdom: interrupted time series study. *BMJ* 2011;**342**:d108
19. Campbell SM, Reeves D, Kontopantelis E, Sibbald B, Roland M. Effects of Pay for Performance on the Quality of Primary Care in England. *N Engl J Med* 2009;**361**:368-78
20. Scott A, Sivey P, Ait Ouakrim D, et al. The effect of financial incentives on the quality of health care provided by primary care physicians. *Cochrane Database Syst Rev* 2011(9):CD008451
21. Checkland K, Harrison S, McDonald R, Grant S, Campbell SM, Guthrie B. Biomedicine, holism and general medical practice: responses to the 2004 General Practitioner contract. *Sociology of Health and Illness* 2008;**30**:788-803
22. McDonald R, Harrison S, Checkland K, Campbell S, Roland M. Impact of financial incentives on clinical autonomy and internal motivation in primary care: ethnographic study. *BMJ* 2007;**334**(7608):1333-34
23. Maisey S, Steel N, Marsh R, Gillam S, Fleetcroft R, Howe A. Effects of payment for performance in primary care: qualitative interview study. *Journal of Health Services Research & Policy* 2008;**13**(3):133-39 doi: 10.1258/jhsrp.2008.007118[published Online First: Epub Date]].
24. Mitchell C, Dwyer R, Hagan T, Mathers N. Impact of the QOF and the NICE guideline in the diagnosis and management of depression: a qualitative study. *Br. J. Gen. Pract.* 2011;**61**(586):e279-e89 doi: 10.3399/bjgp11X572472[published Online First: Epub Date]].
25. Coventry PA, Hays R, Dickens C, et al. Talking about depression: a qualitative study of barriers to managing depression in people with long term conditions in primary care. *BMC Fam Pract* 2011;**12**:10 doi: 10.1186/1471-2296-12-10[published Online First: Epub Date]].
26. McLintock K, Russell A, West R, et al. Effect of financial incentives on screening for depression in patients with chronic disease in the United Kingdom: an interrupted time series study. Manuscript in preparation 2013
27. Practitioners RCoG. Supporting Carers: An action guide for general practitioners and their teams.: Royal College of General Practitioners, 2011.
28. Burden AD, Boon MH, Leman J, Wilson H, Richmond R, Ormerod AD. Diagnosis and management of psoriasis and psoriatic arthritis in adults: summary of SIGN guidance. *BMJ* 2010;**341** doi: 10.1136/bmj.c5623[published Online First: Epub Date]].
29. Collier F, Smith RC, Morton CA. Diagnosis and management of hidradenitis suppurativa. *BMJ* 2013;**346** doi: 10.1136/bmj.f2121[published Online First: Epub Date]].
30. Emerson RM, Fretz RI, Shaw LL. *Writing ethnographic fieldnotes*. 2nd ed: University of Chicago Press, 2011.
31. Chew-Graham CA, Hunter C, Langer S, et al. How QOF is shaping primary care review consultations: a longitudinal qualitative study. *BMC Fam Pract* 2013;**14**(1):103
32. Campbell SM, McDonald R, Lester H. The experience of pay for performance in English family practice: a qualitative study. *Annals of Family Medicine* 2008;**6**(3):228-34

- 1
2
3 33. Hannon KL, Lester HE, Campbell SM. Patients' views of pay for performance in primary care: a
4 qualitative study. *Br. J. Gen. Pract.*; **62**(598):e322-e28 doi: 10.3399/bjgp12X641438[published
5 Online First: Epub Date]].
- 6 34. Lester H, Matharu T, Mohammed MA, Lester D, Foskett-Tharby R. Implementation of pay for
7 performance in primary care: a qualitative study 8 years after introduction. *Br. J. Gen. Pract.*
8 2013;**63**(611):e408-e15 doi: 10.3399/bjgp13X668203[published Online First: Epub Date]].
- 9 35. Rousseau N, McColl E, Newton J, Grimshaw J, Eccles M. Practice based, longitudinal, qualitative
10 interview study of computerised evidence based guidelines in primary care. *BMJ*
11 2003;**326**(7384):314 doi: 10.1136/bmj.326.7384.314[published Online First: Epub Date]].
- 12 36. Craig P, Dieppe P, Macintyre S, Michie S, Nazareth I, Petticrew M. Developing and evaluating
13 complex interventions: the new Medical Research Council guidance. *BMJ* 2008;**337** doi:
14 10.1136/bmj.a1655[published Online First: Epub Date]].
- 15 37. Dixon-Woods M, Leslie M, Bion J, Tarrant C. What Counts? An Ethnographic Study of Infection
16 Data Reported to a Patient Safety Program. *Milbank Quarterly* 2012;**90**(3):548-91 doi:
17 10.1111/j.1468-0009.2012.00674.x[published Online First: Epub Date]].
- 18 38. Public Health England. National General Practice Profiles - Leeds PCT. Secondary National
19 General Practice Profiles - Leeds PCT 2013.
20 [http://www.apho.org.uk/PracProf/Profile.aspx#mod,2,pyr,2012,pat,2,par,E16000074,are,-](http://www.apho.org.uk/PracProf/Profile.aspx#mod,2,pyr,2012,pat,2,par,E16000074,are,-sid1,2000002,ind1,243-4,sid2,2000005,ind2,-)
21 [sid1,2000002,ind1,243-4,sid2,2000005,ind2,-](http://www.apho.org.uk/PracProf/Profile.aspx#mod,2,pyr,2012,pat,2,par,E16000074,are,-sid1,2000002,ind1,243-4,sid2,2000005,ind2,-).
- 22 39. Fallowfield L, Jenkins V. Effective communication skills are the key to good cancer care. *European*
23 *journal of cancer (Oxford, England : 1990)* 1999;**35**(11):1592-7
- 24 40. Lecouturier J, Bamford C, Hughes J, et al. Appropriate disclosure of a diagnosis of dementia:
25 identifying the key behaviours of 'best practice'. *BMC Health Services Research* 2008;**8**(1):1-
26 10 doi: 10.1186/1472-6963-8-95[published Online First: Epub Date]].
- 27 41. Coyne JC, Schwenk TL, Fechner-Bates S. Nondetection of depression by primary care physicians
28 reconsidered. *General Hospital Psychiatry* 1995;**17**(1):3-12 doi:
29 [http://dx.doi.org/10.1016/0163-8343\(94\)00056-J](http://dx.doi.org/10.1016/0163-8343(94)00056-J)[published Online First: Epub Date]].
- 30 42. Arroll B, Goodyear-Smith F, Crengle S, et al. Validation of PHQ-2 and PHQ-9 to screen for major
31 depression in the primary care population. *Ann Fam Med* 2010;**8**(4):348-53 doi:
32 10.1370/afm.1139[published Online First: Epub Date]].
- 33 43. Crosson JC, Heisler M, Subramanian U, et al. Physicians' Perceptions of Barriers to Cardiovascular
34 Disease Risk Factor Control among Patients with Diabetes: Results from the Translating
35 Research into Action for Diabetes (TRIAD) Study. *The Journal of the American Board of*
36 *Family Medicine* 2010;**23**(2):171-78 doi: 10.3122/jabfm.2010.02.090125[published Online
37 First: Epub Date]].
- 38 44. Shojania Kaveh G, Jennings A, Mayhew A, Ramsay Craig R, Eccles Martin P, Grimshaw J. The
39 effects of on-screen, point of care computer reminders on processes and outcomes of care.
40 *Cochrane Database of Systematic Reviews* 2009; (3).
41 <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD001096.pub2/abstract>.
- 42 45. Grimshaw JM, Eccles MP, Lavis JN, Hill SJ, Squires JE. Knowledge translation of research findings.
43 *Implementation Science* 2012;**7**(50):1-29
44
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Table 1 – Observed practice characteristics

Surgery	QOF score*	List Size*	Deprivation Score*	Patients Recruited
Practice A	Low	Low	Low	3
Practice B	Low	High	High	13
Practice C	Low	High	Low	5
Practice D	High	High	Low	6
Practice E	High	High	High	6
Practice F	High	Low	High	5
Practice G	Low	High	Low	5
Practice H	Low	Low	Low	5
Practice I	High	High	Low	4
Practice J	Low	Low	High	5
Practice K	Low	Low	High	4
Practice L	High	Low	Low	2

* Compared to Primary Care Trust median

Table 2 - Patient demographics in observed consultations

	<u>No. of patients</u>	<u>% of patients</u>
<u>Gender</u>		
Female	21	33%
Male	42	67%
<u>Age group</u>		
18-30	7	11%
31-50	5	8%
51-64	18	29%
65-79	28	44%
80+	5	8%
<u>Chronic Illness</u>		
CHD	13	21%
DM	46	73%
CHD & DM	4	6%
<u>Ethnicity</u>		
White British	49	78%
Mixed British	1	2%
White Irish	2	3%
Chinese	1	2%
Black Caribbean	5	8%
Pakistani	3	5%
British Asian	1	2%
Indian	1	2%
<u>Previous diagnosis of depression</u>		
Yes	9	14%
No	54	86%

Evaluation of screening for depression in patients with coronary heart disease and/or diabetes in Primary Care

Background:

Depression frequently co-occurs with chronic physical illness, with estimated prevalences of 33% in CHD and 24% in diabetes.(1, 2) This co-morbidity can complicate the recognition of depression.(3, 4) Concurrent depression can worsen the prognosis of both conditions, possibly through biological factors such as neuro-endocrine or autonomic dysfunction, psychological factors such as reduced tolerance and concordance with treatment plans.(2, 5) or behavioural factors such as failure to stop smoking or low physical activity levels. It is therefore important to recognize and respond to co-occurring depression systematically.(6)

The high prevalence of depression in those suffering from chronic physical illness has been recognised in recommendations to 'consider' the diagnosis of depression within, amongst others, NICE clinical guidelines for chronic heart failure, COPD and Parkinson's Disease.(7-9) But studies suggest usual care by GPs fails to recognise between 30% and 50% of depressed patients.(10) Consequently, systematic screening has been advocated as a means of improving detection, treatment and outcomes of depression in adults (11) and in those with chronic illness.(12, 13) New Improving Access to Psychological Therapies guidelines identify people with chronic illness as a key priority area requiring better access to psychological therapies because of the documented comorbidity of depression and long-term physical health conditions (25).

Screening for depression in patients with diabetes and/or heart disease using two standard screening questions from the Patient Health Questionnaire-2 (PHQ-2) was introduced as a new QOF clinical indicator (DEP1) from 2006-7.(14) Practices receive graded payments in return for meeting targets related to this and other indicators.(15) The PHQ-2 compares well with other established assessment and screening instruments.(16)

Although practice achievements in the QOF depression domain are high, with a national average of 93% of eligible patients screened in 2008-9,(17) current evidence indicates that screening for depression in primary care does not in fact improve detection of emotional disorders or improve outcomes for the majority of patients when used in isolation.(18, 19) For screening approaches to be effective it is important that screen-detected cases are further assessed, diagnosed and offered appropriate clinical management.(6) The QOF does not incentivise this and one small single-practice audit suggests that it is not happening in routine practice.(20) Levels of depression detected in patients with chronic physical illness, following

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3 PHQ-2 screening, are far lower than expected when compared with published
4 prevalence statistics.(1, 2, 20)
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6 There is a need for a more robust evaluation of the current QOF driven screening for
7 depression to evaluate its true impact upon depression detection and treatment. If,
8 as seems likely, the current screening initiative is not working as intended then we
9 need to understand why: it may reflect a combination of professional and patient
10 ambivalence to depression screening, the context in which screening takes place or
11 how it fits in with other aspects of clinical care.(21)
12
13

14 We are presently conducting a number of related projects evaluating screening for
15 depression associated with chronic physical illness. We are conducting a systematic
16 review of qualitative studies to explore how people with depressive symptoms
17 understand depression and interviewing patients with chronic physical illness to
18 examine their understanding of depression. These will help us understand the
19 patient perspective. We are also conducting a systematic review examining primary
20 care professionals' attitudes to screening for depression and then interviewing
21 primary care professionals. These will help us understand the professional
22 perspective. However, our understanding will be incomplete until we examine the
23 process and impact of screening for depression in chronic physical illness in primary
24 care. Hence, we are conducting ethnographic work to examine the process of
25 screening and quasi-experimental work to examine its impact. This protocol is
26 concerned with the former.
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32 **Aim and hypotheses:**

33 This is qualitative inductive type of research and as such is not based on
34 hypotheses.
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37 **Primary aim:**

- 38 - To evaluate screening for depression associated with a chronic physical
39 illness (diabetes and CHD) undertaken for QOF, and its relation to
40 subsequent clinical management of patients with depression.
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- 43 - To investigate the process of depression screening during routine patient
44 reviews as perceived by the patients themselves
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47 **Secondary aims:**

- 48 - How does the context and purpose of the chronic illness review for diabetes
49 or CHD affect the process of screening for depression?
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- 52 - How engaged are patients and healthcare professionals with the process of
53 screening?
54
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- 56 - What factors act as barriers to, and which factors promote thorough and
57 comprehensive screening process?
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3 - How do the experiences and outcomes of screening influence any
4 subsequent clinical action?
5
6 - How do (this will be done in PhD research) patients perceive the screening
7 process and what are their recommendation for improving it?
8
9 - Please note that Interviewing healthcare professionals on their experiences of and
10 views on depression screening will also be done, but these interviews form part of
11 further studies and are not a part of this research.
12

13 This study will inform the development of effective strategies to detect and treat
14 depression associated with chronic physical illness.
15

16 **Method:**

17 **Inclusion and exclusion criteria:**

18 **Inclusion criteria:**

- 19
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22
23 1. Being diagnosed with chronic physical illness (diabetes and/or CHD)
24 2. Willing and able to comply with requirements of this study protocol
25 3. Written informed consent obtained to participate in this study
26
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28

29 **Exclusion criteria:**

- 30
31 1. Decline participation in this study
32 2. Unable to comply with requirements of this study protocol
33
34

35 **Design:**

36 A qualitative study involving observation of patient and professional interaction
37 during screening for depression. Semi-structured debriefing interviews will be held
38 with the patients, exploring the process and experience of the consultation in further
39 depth. Patients' medical records will be reviewed after consent has been gained from
40 patients to obtain further information on patient characteristics which will be used to
41 contextualise and aid interpretation of findings.
42
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44

45 **Sampling:**

46 A purposive sample of practices within NHS Leeds will be identified, using a 4x2
47 sampling frame based upon practices with high and low QOF achievements in the
48 DEP1 domain (highest and lowest quartiles), further stratified by list size, deprivation
49 profiles (above and below median), and practice arrangements for chronic illness
50 reviews (dedicated nurse-run clinics versus other arrangements for planned
51 reviews). With two practices in each of 8 cells we will aim to recruit 16 practices.
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55 If recruitment numbers permit we will attempt to stratify this sample further by looking
56 at different demographic and clinical characteristics. As ethnic minority patients are
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3 disproportionately affected by long term conditions (such as diabetes and CHD) and
4 related depression (22), we will recruit them purposively if necessary. For those who
5 are not fluent in English, the patient information sheet and consent forms will be
6 translated into the relevant languages (for example Gujarati, Urdu and/or Hindi), and
7 an interpreter will assist in the debriefing interviews.
8
9

10 **Sample Size:**

11
12 Up to 16 practices, and up to 48 observations within those practices or until
13 saturation is reached (24).
14

15 **Recruitment:**

16
17 All practices in NHS Leeds will be invited to take part in the study. Practice profile
18 data will be sought from NHS and publicly available resources (e.g. The NHS
19 Information Centre: QOF online results database). They will be recruited through the
20 West Yorkshire Primary Care Research Network research ready practice list and by
21 contacting other practices individually by letter. Non-respondents will be contacted
22 again by telephone and letter to maximise recruitment. Interested practices will be
23 visited by the research team to discuss involvement in the project. Funding has been
24 arranged to compensate practices for the time needed to explain the project as well
25 as for undertaking the project.
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29 Phase one of patient recruitment will begin after practices consent to participate. The
30 letters of invitation (on practice headed paper) and patient information packs, with
31 researchers' contact details for further information, will be sent by patients' GP to
32 relevant patients prior to their planned chronic illness reviews.
33
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35 Practice-level consent for observations and patient-level consent will be obtained.
36 Patients who have reviews booked by other means (telephone, by the patient) will be
37 informed of the potential observation when they arrive for their review, or by the
38 practice team when pre-booking appointments. On the day of observations, when
39 the patient books in for their appointment they will be asked at the practice reception if
40 they are interested in participating in the study. Those patients interested in
41 participation will be referred to the researcher and will again have opportunity to ask
42 questions about the research. If they still agree, written consent will be taken by the
43 appropriately trained researcher.
44
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47 The second phase of recruitment will take place for patients who are due to be asked
48 their PHQ-2 screening questions but are not attending a scheduled routine
49 screening. These patients will be identified by practice staff and asked if they would
50 be interested in participating when they arrive at reception for their appointments. If
51 they are interested they will be referred to the researcher who will consent them into
52 the research.
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55 Standard ethical safeguards will apply, e.g. ensuring that undue pressure is not
56 exerted upon patients to participate and allowing them to decline after interview
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3 when consent will be asked for again to ensure they are willing to participate (26).
4 Patients will be reminded before observation, before interview and after interview
5 that they are free to withdraw at any time without giving a reason. We will work with
6 our Patient Advisory Panel (see below) and consult with practices to refine these
7 recruitment methods, information packs and consent forms.
8
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10 **Observation:**

11
12 Screening forms part of the routine chronic illness review for diabetes and CHD in
13 primary care, usually scheduled within nurse-led clinics. A researcher will observe
14 the consultation in person. Observation will consider both verbal and non-verbal
15 features including; how case finding questions are framed and asked, events leading
16 up to questioning, patient verbal and non-verbal reactions and responses, and
17 overall style of the consultation (e.g. friendly, formal). The main data source of
18 observations will be detailed notes taken by the observer. With participants'
19 permission, we intend to make digital audio-recordings of consultations.
20
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22
23 We have considered other means of trying to investigate consultations but have
24 opted for direct observation on the grounds that it is (a) a standard ethnographic
25 technique which allows the researcher to capture both verbal and non-verbal signals,
26 (b) by observing verbal and non-verbal clues and participating in the process of
27 meaning production between professional and the patient during the consultation
28 process, the observer is able to capture explicit and implicit meanings of consultation
29 in great depths; and (c) the observer is not grounded either in the professional's or
30 the patient's perspective and therefore potentially provides a more detached
31 perspective of the consultation. We are aware of the intrusive nature of observation
32 and that people behave differently when observed (e.g. professionals may make
33 more of an 'effort' to ask the PHQ2 questions sensitively). We can ameliorate the
34 effects of being observed for professionals by having a 'run-in' period of
35 familiarisation at each practice. Furthermore, the presence of a third party in
36 consultations is often acceptable to patients in training or routine care. Immediately
37 following observation, the researcher will briefly speak with the GP or nurse who has
38 conducted the check-up about their reflections on the check-up. This will allow a
39 representation of the opinions of all of the individuals in the check up to form part of
40 the research.
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43
44 The observations, digital recordings of consultations and (digitally recorded
45 interviews) will be entered in a computer file in a secure computer network as soon
46 as possible. Paper copies and digital recordings of the observations and taped
47 interviews will be destroyed.
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53 **Interviews:**

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55 Following observation, the researcher will conduct separate debriefing interviews
56 with patients at a private place at the surgery ideally on the day of their appointment,
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3 or within 3 days at a place named by patients. The semi-structured interview will be
4 based on a pre- agreed interview guide. The interviews will last approximately 30
5 minutes and will be taped with participants' permission prior to verbatim transcription.
6 At the start of the interview patients will give verbal consent to participate which will
7 be audiorecorded. They will be reminded they can withdraw from the study during or
8 after the interview without giving a reason and that this will not affect their
9 healthcare. After the interview the patient will be asked again if they consent to be
10 part of the research and will be asked to sign the second part of the consent form.
11 They will be reminded they can withdraw at any time without giving a reason.
12

13 Patient notes will be accessed by the researcher 4-6 weeks after the observation to
14 determine if any follow up from the screening took place with consent from the
15 patient.
16

17 **Analysis:**

18 Observation notes will be typed in computer files. The audiotapes of consultation
19 conversations, and patient interviews will be transcribed verbatim and anonymised.
20 Transcribed data (interviews and observation notes) will be managed with help of
21 NVivo. All transcripts will be read and re-read to ensure familiarity with the data.
22

23 Data (i.e. observation notes, consultation and interview data) will be coded for
24 themes. Interviews in the languages other than English will be professionally
25 translated. Thematic analysis will be undertaken by two researchers independently
26 coding for the emerging themes and then compare codes and themes. The analysis
27 will be further refined by using constant comparison and contrastive approach, and
28 looking for negative cases in order to examine for similarities and differences within
29 and between the patients' perception and observations in different centres. Finally, to
30 improve reliability and validity of data, findings will be triangulated from all three data
31 sources.
32

33 **Ethical issues:**

34 **Potential distress**

35 Recent evidence suggests that qualitative interviewing, even when using
36 unstructured interview guides (i.e. those which are not pre-approved by the ethics
37 committees) does not have long-term negative effect which would require
38 psychological treatment. In fact, the participants are far more likely to experience
39 relief after discussing distressing experiences.(23) However, it is nevertheless
40 possible that the participants will experience distress talking about their illness. To
41 address this issue we will make sure that the researcher working on the study will
42 have considerable experience in qualitative research in healthcare and working with
43 vulnerable patient populations and (s)he will be able to handle these issues
44 sensitively.
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3 If the researcher is not able to address participant's distress then the patient will be
4 referred to GP and/or appropriate services. It is also possible that a researcher will
5 estimate that the participant might be depressed and need help even when routine
6 review and screening have not detected increased distress. In such case the
7 researcher will alert GP. This will be made clear in the PIL.
8
9

10 **Confidentiality**

11
12 We will be mindful of protecting participant confidentiality at all times. The paper
13 copies of the observations and all digital recordings will be immediately destroyed
14 after transcription. During transcription all the personal data in the transcripts will be
15 removed and/ or anonymised so the participants' identity will be protected. The
16 participants will be only referred to by their study number which will bear no
17 resemblance to their identity, NHS number, DOB or similar.
18
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20 Any paper documents (e.g. consent forms) and any information about the participant
21 will be kept in a locked drawer in a locked office. All electronic information will be
22 stored on the University of Leeds' computers which are password protected. The file
23 in which codes are linked to patients' names will only be stored on a password
24 protected computer in a secure network.
25
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27 Even though we will protect participant confidentiality at all times we will make clear
28 to the participants in the PIL that we do have duty of care towards them. This means
29 that if a researcher believes that a patient might be a danger to himself or herself
30 (e.g. suicide ideation) or others we are obliged to alert appropriate services.
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33 Furthermore, we are aware that some patients might discuss circumstances of
34 potential disagreements, conflicts or tensions with their healthcare providers. In order
35 to protect the anonymity of such participants who will continue to see these
36 professionals but might get identified by such incidents and circumstances, we will
37 take further care to protect their anonymity. We will also take care not to disclose
38 what the professionals might have said about the patients and vice versa.
39
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41 **Informed consent**

42
43 The patients will be required to sign a consent form prior to getting involved to the
44 study. Time will be allocated prior to the observation for patient information sheets to
45 be read to and explained to patients if necessary. Those unable to consent for
46 themselves will be excluded from participating. Funding is available for interpretation
47 services for those who do not have adequate command of English. Patients will be
48 able to withdraw from the research without giving a reason at any time.
49
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51 **Lone worker policy**

52
53 Briefing interviews are being conducted on a one-to-one basis between a participant
54 and the researcher. As the participants can choose the time and place of the
55 interview and can opt to being interviewed at their own homes, there is some risk to
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3 the researcher. For this reason the researcher from University of Leeds will follow
4 University's "Lone worker" policy.
5
6

7 **Dissemination and policy relevance:**

8
9 This research will contribute to knowledge about the patients' experience of
10 identification of depression associated with chronic physical disease, an area that is
11 not fully understood at the moment. Information gathered from this study, along with
12 the preceding literature reviews and qualitative interview studies, will enable targeted
13 interventions that may increase the patients' engagement in depression screening
14 and management to be identified and explored. It is not known how patients accept
15 depression screening as part of their routine reviews and whether this is the best
16 forum for detection of distress to take place. If we find that the disclosure of
17 depression is hindered by the current consultation process this research may enable
18 us to identify ways of recognizing distress and depression and engage patients in
19 further decisions about their management. This and future work may identify areas
20 of further support needed for the healthcare professionals involved in identification
21 and management of depressed patients with chronic physical disease. In the longer
22 term, this work will drive the further development of evidence-based interventions to
23 improve the cost-effectiveness of the primary care of depression associated with
24 chronic physical illness.
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30 **References:**

- 31
32 1. Goldney RD, Phillips PJ, Fisher LJ, Wilson DH. Diabetes, Depression, and
33 Quality of Life. *Diabetes Care*2004 May 2004;27(5):1066-70.
34
35 2. Davies SJC, Jackson PR, Potokar J, Nutt DJ. Treatment of anxiety and
36 depressive disorders in patients with cardiovascular disease. *BMJ*2004 April 17,
37 2004;328(7445):939-43.
38
39 3. Lester H, Howe A. Depression in primary care: three key challenges.
40 *Postgraduate Medical Journal*2008;84(996):545-8.
41
42 4. Davidson JR, Meltzer-Brody SE. The underrecognition and undertreatment of
43 depression: what is the breadth and depth of the problem? *J Clin Psychiatry*.
44 [Review]. 1999;60 Suppl 7:4-9; discussion 10-1.
45
46 5. Barth J, Schumacher M, Herrmann-Lingen C. Depression as a Risk Factor for
47 Mortality in Patients With Coronary Heart Disease: A Meta-analysis. *Psychosom*
48 *Med*2004 November 1, 2004;66(6):802-13.
49
50 6. Goldman LS, Nielsen NH, Champion HC. Awareness, diagnosis, and
51 treatment of depression. *J Gen Intern Med*. [Review]. 1999 Sep;14(9):569-80.
52
53 7. National Institute of Clinical Excellence. Chronic heart failure: Management of
54 chronic heart failure in adults in primary and secondary care. London: National
55 Institute for Clinical Excellence2003.
56
57 8. National Institute of Clinical Excellence. Chronic obstructive pulmonary
58 disease: Management of chronic obstructive pulmonary disease in adults in primary
59 and secondary care. London: National Institute for Clinical Excellence2004.

60 07/12/2011

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8

- 1
2
3 9. National Institute of Clinical Excellence. Parkinsons Disease: NICE guideline.
4 London2006.
- 5
6 10. Simon GE, VonKorff M. Recognition, management, and outcomes of
7 depression in primary care.[see comment]. Arch Fam Med. [Research Support, U.S.
8 Gov't, P.H.S.]. 1995 Feb;4(2):99-105.
- 9
10 11. Pignone MP, Gaynes BN, Rushton JL, Burchell CM, Orleans CT, Mulrow CD,
11 et al. Screening for Depression in Adults: A Summary of the Evidence for the U.S.
12 Preventive Services Task Force. Annals of Internal Medicine2002 May 21,
13 2002;136(10):765-76.
- 14
15 12. National Institute of Clinical Excellence. Depression: Management of
16 depression in primary and secondary care. London: National Institute for Clinical
17 Excellence2004.
- 18
19 13. Lichtman JH, Bigger JT, Blumenthal JA, Frasure-Smith N, Kaufmann PG,
20 Lesperance Fo, et al. Depression and Coronary Heart Disease. Circulation2008
21 October 21, 2008;118(17):1768-75.
- 22
23 14. BMJ Best Practice. Screening: Patient Health Questionnaire-2 (PHQ-2).
24 2010; Available from: [http://bestpractice.bmj.com/best-](http://bestpractice.bmj.com/best-practice/monograph/55/prevention.html)
25 [practice/monograph/55/prevention.html](http://bestpractice.bmj.com/best-practice/monograph/55/prevention.html).
- 26
27 15. NHS Information Centre for health and social care. Quality and outcomes
28 framework - online GP practice results database. 2010 [cited 2010 20 October
29 2010]; Available from: <http://www.qof.ic.nhs.uk/>.
- 30
31 16. Whooley MA, Avins AL, Miranda J, Browner WS. Case-finding instruments for
32 depression. Two questions are as good as many.[see comment]. J Gen Intern Med.
33 [Clinical
34 Comparative Study
35 Research Support, Non-U.S. Gov't
36 Research Support, U.S. Gov't, Non-P.H.S.]. 1997 Jul;12(7):439-45.
- 37
38 17. The NHS Information Centre for Health and Social Care. Quality and
39 Outcomes Framework 2007/2008. 2008 [10/8/09]; Available from:
40 [http://www.ic.nhs.uk/webfiles/QOF/2007-](http://www.ic.nhs.uk/webfiles/QOF/2007-08/NewFilesGS/National%20QOF%20tables%202007-08%20-%20clinical.xls)
41 [08/NewFilesGS/National%20QOF%20tables%202007-08%20-%20clinical.xls](http://www.ic.nhs.uk/webfiles/QOF/2007-08/NewFilesGS/National%20QOF%20tables%202007-08%20-%20clinical.xls).
- 42
43 18. Gilbody SM, House A, Sheldon T. Screening and case finding instruments for
44 depression [Systematic Review]. Cochrane Database of Systematic Reviews.
45 [Systematic Review.]. 2009;3:3.
- 46
47 19. Gilbody S, Sheldon T, House A. Screening and case-finding instruments for
48 depression: a meta-analysis. Canadian Medical Association Journal2008 April 8,
49 2008;178(8):997-1003.
- 50
51 20. Subramanian DN, Hopayian K. An audit of the first year of screening for
52 depression in patients with diabetes and ischaemic heart disease under the Quality
53 and Outcomes Framework. Qual Prim Care2008;16(5):341-4.
- 54
55 21. Gask L, Bower P, Lovell K, Escott D, Archer J, Gilbody S, et al. What work
56 has to be done to implement collaborative care for depression? Process evaluation
57
58

1
2
3 of a trial utilizing the Normalization Process Model. Implementation
4 Science2010;5(1):15.

5
6 22. Gunaratman Y. Improving the quality of palliative care: Race Equality
7 Foundation, 2007.

8
9 23. Corbin J, Morse JM. The Unstructured Interactive Interview: Issues of
10 Reciprocity and Risks when Dealing with Sensitive Topics. Qualitative Inquiry2003
11 June 1, 2003;9(3):335-54.

12
13 24. Francis, JJ; Johnston, M; Robertson, C; Glidewell, L; Entwistle, V; Eccles, MP;
14 Grimshaw, JM. What is an adequate sample size? Operationalising data saturation
15 for theory-based interview studies. Psychol Health December 2010, 25(10): 1229-
16 1245.

17
18 25. Department of Health, Talking therapies: A four-year plan of action, 2011
19 [23/09/2011], Available from: <[http://www.dh.gov.uk/en/
20 Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_123759](http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_123759)>.

21
22 26. General Medical Council, Making and using visual and audio recordings of
23 patients, 2011 [04/10/2011], Available from: [http://www.gmc-
24 uk.org/guidance/ethical_guidance/making_audiovisual.asp](http://www.gmc-uk.org/guidance/ethical_guidance/making_audiovisual.asp)
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Evaluation of screening for depression in patients with coronary heart disease and/or diabetes in primary care

Invitation We would like to invite you to take part in a research study, tell you why we are doing the research and what it would involve.

Why are we doing the study? We know that doctors, nurses and patients have mixed feelings about screening for depression in chronic physical illness (diabetes and coronary heart disease) undertaken for QOF. We want to find out whether this screening has any effect on the detection and treatment of depression. As part of a larger study, we wish to observe the process of depression screening in routine clinical practice. We are not interested in judging the performance of individuals or practices and all of the data we collect will be anonymised.

Why am I being asked? Your practice participates in QOF and is encouraged to screen patients with heart disease and/or diabetes for depression.

Do I have to take part? No, it is voluntary. If you want to take part we will ask you to sign a consent form to show you have agreed to take part. You can still change your mind at any time without giving a reason.

What will I have to do if I take part? Consent from those working at the practice will be obtained. Practices will be asked to assist the recruitment of patients with diabetes and/or coronary heart disease (CHD). This will include pre-arranged chronic disease reviews and opportunistic routine appointments with suitable patients. However, we will work with practices to minimise disruption to routines.

The researcher will observe these consultations after gaining consent from the patients and healthcare professionals. The appointments will be audio recorded and the researcher may also make some notes.

The researcher will then interview patients about their experiences of depression screening. This interview may take place at the practice or at a location of the patient's choosing.

We appreciate that people often behave differently from usual when being observed. With this in mind, the researcher may also observe other consultations or aspects of the healthcare professional's work to get them used to being observed and to gain an understanding of the 'bigger picture' of their work.



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4 Patient notes for those patients who have consented will be reviewed by the researcher 4-6 weeks
5 after the observation to examine any events after screening took place.
6
7

8 **Will I be paid?** Practices will be reimbursed by the University of Leeds and CLRN. Practices will
9 receive £300 reimbursement for taking part in the study as well as a fee for each patient recruited.
10

11 **What are the possible benefits of taking part?** Individually you do not stand to gain but your
12 contribution will help us to understand whether QOF-driven screening for depression has had an
13 impact on patient care; this will inform efforts to improve depression care in the future. We also
14 hope that you might find participating in this study interesting and we are also willing to provide
15 evidence of participation to count towards the research domains of annual appraisals.
16
17

18 **What are the possible disadvantages of taking part?** We appreciate that healthcare
19 professionals are very busy. We intend to minimize disruption to patient care responsibilities. Time
20 needed to participate in this study will be reimbursed as above.
21
22

23 **Will my taking part in the study be kept confidential?** Yes. The information we collect will be
24 anonymous and kept securely so that only authorised people have access to it; they will be bound
25 by the rules of confidentiality.
26
27

28 **What will happen to the results of the study?** It will take about 12 months to complete the study.
29 When it is finished we will send you a report of the results. We expect the results will also be
30 presented at medical conferences and published in a medical journal. No confidential information
31 will be used.
32
33

34 **Who is organising the study?** The principal investigator is Dr Sarah Alderson, a GP and Clinical
35 Lecturer from the University of Leeds. The other people involved are Professor Robbie Foy, Dr
36 Barbara Potrata, Amy Russell and Professor Allan House from the University of Leeds.
37
38

39 **Who is funding this study?** This study has been funded by the National Institute for Health
40 Research, Research for Patient Benefit Programme.
41
42

43 **Who has reviewed the study?** This study has been favorably reviewed by the South West
44 Research Ethics Proportionate Review Sub-Committee (ref: 11/SW/0335).
45
46

47 **What if I have a complaint?** We think this is unlikely to happen, but if it does you can contact us
48 at the email address or telephone number below, or speak to the complaints department of NHS
49 Leeds on 0800 052 5270.
50
51

52 **If you want to discuss this project in further detail please contact:** Amy Russell on 0113 343
53 0804 or email A.M.Russell@Leeds.ac.uk.
54
55



PARTICIPANT INFORMATION SHEET

1. **Study title:** "Evaluation of screening for depression in patients with coronary heart disease and/or diabetes in primary care"

2. **Invitation to take part**

You are being invited to take part in a research study. Before you decide if you would like to be involved, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully. Discuss it with your friends and family if you wish. Please ask the researchers or your GP if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

3. **What is the purpose of the study?**

We want to observe the mood screening process that often takes place during the annual review for people with diabetes and/or coronary heart disease. We'd like to speak to patients to find out how they feel about the mood screening process and what their experiences are of the routine review. We are not trying to change your treatment; we are just trying to find out your views and experiences.

4. **Why have I been chosen?**

Because you regularly visit the nurse or doctor about your diabetes.
Or because you regularly visit the nurse or doctor about your heart or circulation.
We hope to have about 50 people in the study.

5. **Do I have to take part in this study?**

No, it is voluntary. If you decide to take part you are still free to withdraw at any time during your participation, without giving a reason. If you decide not to take part, or decide to withdraw, the treatment and the standard of care you receive, and any of your legal rights will not be affected in any way.

6. **What will happen to me if I take part?**

Your participation will involve your appointment with the nurse or GP being recorded and observed by a researcher. You will then be interviewed for up to an hour on the same day as your appointment or up to 3 days later, it is your choice when and where you are interviewed.

If you are interested in taking part please tell the researcher who will be at your GP practice when you arrive for your appointment. If you wish to take part, we will ask you to sign a consent form to show you have agreed to take part.

A researcher will sit in your appointment to observe and also audio-record your appointment. After your review the researcher may briefly speak to your GP or nurse about your review and the decisions they made. The researcher will also ask when and where you would like to be interviewed. This appointment can be at a GP surgery, at your home or at any other suitable place you choose. There will only be one interview which might last up to an hour then your participation in the research is complete. You will be asked some questions about yourself, your mood and the annual review process. The interview will be audio-taped and subsequently written out in full by the researcher. We may use quotes of what you say in the study report; however we will make sure you cannot be identified.

1
2
3 You will receive a copy of this information sheet and a copy of your consent form to
4 keep. You can also receive a summary of the findings of our research if you want.
5 Amy (the researcher) will ask you if you would like this when you sign your consent
6 form.
7

8 **7. Will I be paid?**

9 No, but we will cover your travel expenses if needed for the interview.
10

11 **8. What are the possible benefits of taking part?**

12 You will not directly benefit by taking part in this study, although some patients find it
13 beneficial to talk about their experiences and treatment decisions.
14

15 **9. What are the possible disadvantages and risks of taking part?**

16 *Talking about your experiences may at times be distressing. If you do find the*
17 *process distressing then our researcher will be able to discuss these issues with you,*
18 *and, if necessary, will refer you (with your agreement) for additional support.* Your GP
19 will be aware you are taking part in this research and can provide support to you. If a
20 researcher believes that you might be a danger to yourself (e.g. you are thinking
21 about harming yourself) or others we are obliged to alert appropriate services.
22

23 **10. Complaints**

24 If you wish to complain, or have any concerns about any aspect of the way you have
25 been approached or treated during the course of the study, please first talk to the
26 research team on the numbers and emails below and we will try to address your
27 concerns. If you are still dissatisfied then you can contact Patient Advice and Liaison
28 Service on Freephone 0800 0525270.

29 We do not anticipate that any harm will come to you from participating in this
30 research. In the event that something does go wrong and you are harmed during the
31 research and this is due to someone's negligence then you may have grounds for a
32 legal action for compensation against University of Leeds or NHS Leeds but you may
33 have to pay your legal costs. The normal National Health Service complaints
34 mechanisms will still be available to you through the Patient Advice and Liaison
35 Service (see above).
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39 **11. Will my taking part in the study be kept confidential?**

40 We will be mindful of protecting your confidentiality at all times. The interview
41 recordings will be immediately destroyed after transcription (writing down what has
42 been said) and any personal data will be removed and/or anonymised to protect your
43 identity.

44 Your GP Practice will know you are taking part as the researcher will be in the room
45 for your review. However, we are aware that some patients may discuss
46 circumstances, dislikes and/or potential conflict or tensions they have with their
47 doctors or nurses. Such experiences and events could be discussed in academic
48 papers, but in all cases, including these, we will use pseudonyms and anonymised
49 accounts to protect your identity.
50

51 **12. What will happen to the results of the research study?**

52 We plan to present the results at academic conferences and publish the results in
53 academic journals; this will aid health professionals to learn more about how to
54 identify patients with low mood. Summary results may also be given to patient
55 organisations.

56 If you would like to obtain a copy of the results, please let the researchers know and
57 they will send you a copy when the study is completed.
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5 **13. Who is organising and funding the research?**

6 The person you will speak with is Amy Russell, a researcher from the University of
7 Leeds. Sarah Alderson is in charge of this project and also based at the University of
8 Leeds. The study is funded by the National Institute for Health Research as part of
9 the Research for Patient's Benefit programme.
10

11 **14. Who has reviewed the study?**

12 All research in the NHS is looked at by independent group of people, called a
13 Research Ethics Committee, to protect your interests. This study has been reviewed
14 and given favourable opinion by the South West Research Ethics Committee (ref:
15 11/SW/0335).
16

17 **15. Contact for Further Information**

18 You may obtain more information about this study by contacting the study's
19 researcher Amy M. Russell on 0113 343 0804 or email a.m.russell@leeds.ac.uk or
20 the study's Chief Investigator Sarah Alderson (s.l.alderson@leeds.ac.uk) 0113
21 3430867 <http://www.leeds.ac.uk/hsp/hr/research/AUPC/rfpb-depression.html>
22 You can also contact the National Institute of Health Research's Patient and Public
23 Involvement Manager: Marianne Miles, marianne.miles@nihr.ac.uk or 0113 34
24 30440 or People in Research <http://www.peopleinresearch.org/> both of whom provide
25 independent advice on taking part in research.
26

27 **Thank you for reading this.**
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BMJ Open

Incentivised case finding for depression in patients with chronic heart disease and diabetes in primary care: an ethnographic study

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Secondary Subject Heading:	Patient-centred medicine, Mental health, Health policy, Cardiovascular medicine, Diabetes and endocrinology
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3 **Incentivised case finding for depression in patients with chronic heart disease and**
4 **diabetes in primary care: an ethnographic study**
5

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Abstract

Objective

To examine the process of case-finding for depression in people with diabetes and coronary heart disease within the context of a pay-for-performance scheme.

Design

Ethnographic study drawing upon observations of practice routines and consultations, debriefing interviews with staff and patients, and review of patient records.

Setting

General practices in Leeds, United Kingdom.

Participants

Twelve purposively sampled practices with a total of 119 staff; 63 consultation observations; and 57 patient interviews.

Main outcome measure

Audio-recorded consultations and interviews with patients and health care professionals along with observation field notes were thematically analysed. We assessed outcomes of case-finding from patient records.

Results

Case-finding exacerbated the discordance between patient and professional agendas, the latter already dominated by the tightly structured and time-limited nature of chronic illness reviews. Professional beliefs and abilities affected how case-finding was undertaken; there was uncertainty about how to ask the questions, particularly amongst nursing staff.

Professionals were often wary of opening an emotional “can of worms.” Subsequently, patient responses potentially suggesting emotional problems could be prematurely shut down by professionals. Patients did not understand why they were asked questions about depression. This sometimes led to defensive or even defiant answers to case-finding.

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3 Follow up of patients highlighted inconsistent systems and lines of communication for
4
5 dealing with screened positive cases.
6

7 *Conclusions*

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10 Case-finding does not fit naturally within consultations; both professional and patient
11
12 reactions somewhat subverted the process recommended by national guidance. Quality
13
14 improvement strategies will need to take account of our results in two ways. First, despite
15
16 their apparent simplicity, the case-finding questions are not consultation-friendly, and
17
18 acceptable alternative ways to raise the issue of depression need to be supported. Second,
19
20 case-finding needs to operate structured pathways which can be accommodated within
21
22 available systems and resources.
23

24 **Strengths and limitations of this study**

25 **Strengths**

- 26
- 27
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- 29
- 30 • Multi-site ethnography of broadly representative general practices
- 31
- 32 • Triangulation through use of multiple sources of data
- 33
- 34

35 **Limitations**

- 36
- 37 • Potential for clinician and patient behaviour to alter as a response to being observed
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- 39
- 40 • Short periods of observation in each practice limiting range of types of behaviour
- 41
42 observed
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- 44 • Observations within one geographical area, thereby potentially limiting
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46 generalisability
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Introduction

The detection and management of depression associated with chronic physical illness represents a major challenge for primary care. Depression is twice as common in those with chronic physical illness such as coronary heart disease (CHD) and diabetes compared to those without chronic physical illness [1-4]. Such co-morbidity can make depression hard to recognize, especially as symptoms of depression (such as fatigue) overlap with those of chronic physical illnesses [5]. Co-morbidity is also associated with poorer outcomes, including mortality [3 6 7]. One response is case-finding, defined as selective screening for depression in populations at high risk, such as those with chronic illness. This has been recommended by national guidance in the UK [8] and elsewhere. [9 10]. The Quality Outcomes Framework (QOF), a pay-for-performance scheme in UK primary care, rewarded depression case-finding using two standard screening questions from the Patient Health Questionnaire-2 (PHQ-2) in all patients with CHD or diabetes [11]. The PHQ-2 asks, 'In the past two weeks, have you been bothered by: little interest or pleasure in doing things; and feeling down, depressed or hopeless?' [12] Routine data suggested high levels of screening, with a national average of 86% of eligible patients screened in 2011-12 [13].

However, there are problems with both the rationale underpinning this recommendation and the means undertaken to promote its implementation in the UK.

Firstly, there is no evidence that case-finding for depression by itself improves patient outcomes [14]. For case-finding to be effective it is important that potential cases are further assessed, diagnosed and offered appropriate clinical management within a structured clinical pathway [15-17]. There was no closely allied incentive in the QOF programme for subsequent patient care. Case-finding should also be considered against other recommended criteria for screening tests, such as acceptability and having an agreed policy about whom to treat as patients [18 19].

Secondly, evidence on the effects of financial incentives on primary care practice is, at best, mixed [20-22]. There are concerns that such incentives undermine professionals' intrinsic

1
2
3 motivation, patient-centeredness, and continuity of care and have led to a 'tick box' culture
4 as health professionals work through checklists for chronic illness management [21 23-25].
5
6 Health professionals themselves have expressed dissatisfaction with incentivised depression
7
8 management, particularly the use of incentivised depression severity measurements. [26-28].
9

10
11 Our accompanying interrupted time series analysis found that incentivised case finding
12
13 increased new depression-related diagnoses in people with diabetes and CHD and
14
15 perpetuated rising trends in new prescriptions of antidepressants [29]. Even though this
16
17 incentivised case finding ceased in 2012, there are continuing calls for 'something to be
18
19 done' to detect and treat depression in high risk groups [30-32]. However, the professional
20
21 and patient experiences of incentivised case-finding, how it affected clinical care, and its fit
22
23 with the routines of practice life are poorly understood. We investigated the process of
24
25 incentivised case-finding during scheduled and opportunistic reviews of patients with
26
27 diabetes and CHD.
28
29

30 31 **Methods**

32 33 *Design and setting*

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35 Our ethnographic design combined direct observation with interviews and review of patient
36
37 records. We wanted to build an in-depth understanding of how patient case-finding was
38
39 conducted within the context of everyday practice life and routine patient care. The study
40
41 took place in general practices in Leeds, UK.
42
43
44

45 46 *Participants*

47
48 We invited all practices in Leeds to participate. We then sought a purposive sample of
49
50 practices using a four-by-two sampling frame based upon whether practice QOF
51
52 achievement was above or below the Leeds median, further stratified by list size and
53
54 deprivation profiles. Practices that consented to participate were booked for a week of
55
56 observation, during which we aimed to observe at least three consultations.
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1
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3 Practices sent letters of invitation and information packs to patients scheduled for chronic
4 disease reviews within the observation week. We also approached patients attending for
5 routine consultations to enable observation of opportunistic case-finding. Practice staff
6 identified patients due to be asked the case-finding questions and asked if they would be
7 interested in participating when they arrived at reception for their appointment. All patients
8 and professionals subsequently observed gave informed consent.

15 *Data collection and analysis*

16
17 An ethnographer (AR) used a funnelling approach to observe and describe the context of
18 and behaviours within the practice [33], moving to detailed observation and audio-recording
19 of consultations. Observation considered both verbal and non-verbal features including: how
20 case-finding questions are framed and asked; events leading up to questioning; patient
21 verbal and non-verbal reactions and responses; and overall style of the consultation. This
22 style of observation allowed the researcher to layer the analysis of the consultations with
23 contextual information providing a richer interpretation of the observation data. She held
24 semi-structured debriefing interviews with patients who had been observed. The interviews
25 aimed to explore patient views on the process and experience of the consultation in further
26 depth. Unstructured interviews took place with the health care professionals involved in
27 depression case-finding and notes taken on all discussions regarding depression case-
28 finding. We reviewed patients' medical records six weeks after observation to check for any
29 subsequent clinical events related to depression identification and management. Events
30 included appointments where mood was discussed, telephone consultations, depression
31 severity assessments, referrals to mental health teams or talking therapies and new
32 prescriptions for depression medication.

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52 The perceived relative importance and organisation of QOF-related case-finding may vary
53 throughout the year. To partly ameliorate this we observed two practices towards the end of
54 the financial year when practices are typically working hardest to achieve QOF targets.
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3 Transcribed data (interviews, observation transcripts and observation notes) were managed
4 using NVivo9 and coded for themes. Thematic analysis was undertaken by two researchers,
5 independently coding for the themes and then comparing codes and themes. The analysis
6 was further refined by using constant comparison of themes, and looking for negative cases
7 in order to examine for similarities and differences within and between the patients'
8 perception and observations in different centres. Finally, to improve reliability and validity of
9 data, we triangulated findings from all three data sources.
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17 *Ethical review*

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20 The study was approved by National Research Ethics Service Committee South West –
21 Exeter (11/SW/0335).
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27 **Results**

28
29 Twelve practices participated and a total of 63 patient consultations were observed (range 2-
30 13 per practice; Table 1). Practice characteristics were relatively balanced, with five having
31 QOF achievement above the median for Leeds, five above median population deprivation
32 scores, and six above median list size. Patients were most commonly male, age 51-79
33 years, and white British (Table 2). Most (73%) participants had diabetes and nine (14%) had
34 a previous diagnosis of depression. Nine of the observed case findings took place
35 'opportunistically' within routine GP appointments. The rest occurred within dedicated
36 chronic disease clinics, usually with nurses.
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46 Based upon available guidance, observations and interviews, we constructed a basic
47 normative model of the process by which case-finding was expected to improve depression
48 detection and treatment (Figure 1). We then identified a number of ways in which
49 professional and patient behaviours and beliefs and the working patterns of general
50 practices subverted or affected the operation of this model. We found five barriers:
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3 how to undertake the case-finding itself; reluctance to open a “can of worms”; patients being
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5 unaware of depression risk or case-finding taking place; and competing practice priorities
6
7 and inconsistent lines of communication around the management of potential cases of
8
9 depression.

10 11 *Discordance between patient and professional agendas*

12
13 Case-finding often occurred within tightly structured and time-limited chronic illness reviews
14
15 required to document QOF processes of care, and appeared to exacerbate existing
16
17 discordance. This led to professionals disregarding attempts by patients to steer the
18
19 consultation around to their own perceived needs. Patients were often not focused on and
20
21 often did not understand the purpose of the review process and used the consultation as an
22
23 opportunity to raise other problems. To manage this, professionals often interrupted patients
24
25 or returned the consultation to its purpose, discounting clues that the patient had worries
26
27 related to the chronic disease being reviewed or other illnesses.
28
29

30
31 Patient: [talking about hypoglycaemic attacks which were a subject of significant
32
33 anxiety for this patient (revealed in interview after appointment)] *Only time that I went*
34
35 *funny, I had a tooth out and I'd had, I couldn't have any breakfast, or I didn't have any*
36
37 *breakfast, because I don't like to be poorly when I've had teeth out, because I used*
38
39 *to be when I was younger, am I talking and disturbing....*

40
41 [Fieldnote] Nurse is trying to measure blood pressure; patient looks agitated.

42
43 Nurse: *Yes, I think you just probably need to just be quiet for a couple of minutes*
44
45 *while I check it, because it's even higher now! We want it to go down! Just try and*
46
47 *relax. OK. Observation 29*
48
49

50
51 At this stage in the consultation the patient became distressed, apparently wishing to discuss
52
53 further their worries about hypoglycaemia. The professional subsequently moved the
54
55 conversation on to another QOF target and no follow up of concerns about hypoglycaemia
56
57 was arranged. The patient later told the researcher she was extremely worried about hypos
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3 and was experiencing consistently low mood and high anxiety. The context of chronic illness
4 reviews was restrictive – in this case an opportunity for direct, subject specific case-finding
5 was missed because of the necessity to ask about and record other items. This represents
6 a missed opportunity for case-finding at a point in the review when the patient might have
7 been receptive to exploring associated mood problems.
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13 Difficulties arose in the consultation when the patient mentioned something that was
14 perceived to be important but unrelated to the review. Sometimes the review had to be
15 abandoned as the patient's agenda became too important to be ignored, or the patient too
16 distressed to continue concentrating on the review. This more patient-centred approach
17 appeared to occur more often in practices that had lower than average QOF achievement,
18 suggesting that such practices traded off potential income against responsiveness to
19 patients.
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27 28 *Professional uncertainty around how to undertake the case-finding itself*

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30
31 Professional beliefs and abilities affected how case-finding was undertaken. In conversation
32 professionals expressed uncertainty about how best to phrase and ask the questions,
33 particularly nursing staff who told the researcher they sometimes felt insufficiently trained on
34 how to manage patients with possible depression. When asked, they questioned whether
35 they were case-finding for QOF rather than patient benefit. We noticed that those who felt
36 that the case-finding was for the benefit of patients appeared to work in practices that were
37 in areas of low deprivation, where as those in areas of higher deprivation felt there was a
38 lack of time to ask the questions and deal with any responses that might indicate a problem
39 with mood. In the context of a time-restricted consultation they felt overburdened.
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50 Field notes Practice A: [The nurse] referred to QOF as coming from “*on high*” to tell her
51 to incorporate it [case-finding]. She felt depression screening was problematic as they
52 had received “*no training*” in mental health or in screening and they were very
53 “*stretched for time in the appointment.*”
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3 Professionals avoided directly asking case-finding questions if they were familiar with
4 patients but still recorded case-finding; they expressed beliefs that they could identify mood
5 changes through existing knowledge of patients. They often adapted the questions to suit
6 their consultation style or perceived patient needs.
7
8
9

10
11 Sometimes confusion arose when the questions were framed to ask whether the patient was
12 coping with their illness, rather than to assess mood disorders in general. The patient
13 answered that they were managing their condition well but did not talk about their mood.
14 This was because the professionals believed the case-finding was to detect depression
15 associated with chronic disease only, not depression of any cause.
16
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21
22 *Nurse: Then so do you feel ok about your diabetes, do you have any, do you worry*
23 *about it, does it bother you at all? Observation 27*
24
25
26

27 The case-finding questions were usually asked in the middle of chronic disease reviews.
28 Generally the templates for such reviews were followed in order, with depression case-
29 finding often occurring after discussion of alcohol consumption and smoking status. Once
30 asked, the professional would move on to discuss diet and exercise. The case-finding
31 questions appeared out of place in the consultation that mainly involved measuring physical
32 factors rather than mood related problems. When asked about the case-finding, most
33 nurses felt it was difficult to switch from asking something that could be measured (such as
34 weight, units of alcohol consumed) to something more subjective.
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44 *Reluctance to open a "can of worms"*

45

46 Professionals at nearly every practice mentioned the term "can of worms" to express unease
47 with case-finding for depression. This metaphor indicated professional perceptions of both
48 patient discomfort with being asked about emotions and their own emotional labour in asking
49 the questions. "Can of worms" helped articulate the belief that case-finding for depression
50 was anticipated as a problematic part of the consultation and threatened to derail routines.
51 Professionals anticipated having to manage and close down answers before patients began
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3 to give them; this often informed their immediate response to patients' answers regardless of
4
5 what patients said.
6

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8 Many felt that by identifying a problem, it was their duty to uncover further the scale of the
9
10 problem and to discuss this further with the patient, rather than requesting that the patient
11
12 should make an appointment to discuss this with the doctor or when there would be more
13
14 time to devote to this. It was hard to move the consultation onto the rest of the review. This
15
16 often led to the questions being asked in a manner that made it difficult for the patient to
17
18 answer 'yes', such as "you have no problems coping, do you?" pre-empting any difficulties
19
20 the questions may cause.
21

22
23 "Then Nurse 1 said *"it's a question that makes you sigh, makes your heart heavy,*
24
25 *because you're there and you say "you've been down and depressed?"* and she said
26
27 "loads of them saying "yes" and she's thinking 'no, you're not, you're not, depressed,
28
29 depressed, you're just a bit down, a bit fed up, aren't we all!' So then she has to say
30
31 "Oh, why do you think that?" and it starts this 10 minute conversation that she really
32
33 didn't want to be having, because she's had to do three blood pressure readings,
34
35 loads of blood tests, trouble getting a vein, had to check their feet, loads of faffing
36
37 around, she's only got 20 minutes." Field notes Practice F
38

39
40 Patients seldom answered with a simple "yes" or "no" and brought up specific difficulties,
41
42 such as bereavement. Following an initial acknowledgement, professionals then tended to
43
44 move consultations on without discussing the effects of these life events on mood.
45
46 Therefore, professionals prematurely shut down patient responses suggesting emotional
47
48 problems to reduce the risk of extended consultations.

49
50 Nurse: *Are you alright, you haven't been having little interest in doing things, or?*

51
52 Patient: *No, no.*

53
54 Nurse: *Are you fine, are you okay? That's okay.*

55
56 Patient: *It's been 10 years since I've lost [woman's name].*

57
58 Nurse: *Is it, what, is that your wife?*
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3 Patient: Yes.

4 Nurse: 10 years? That's a long time, isn't it? Can I just check your tablets then, do
5
6 you take aspirin, [lists medication]... Observation 23
7
8

9
10 Some health care professionals talked about the emotional labour involved in case-finding.
11
12 Discussing depression was seen as being emotionally difficult and required feeling strong in
13
14 themselves, in order to cope with the answer. The emotional burden was exacerbated by
15
16 the professional's perception that regardless of the outcome of case-finding, there wouldn't
17
18 be in any change for the better for the patient. They perceived they were expending a great
19
20 deal of emotional labour on something that did not improve patient care and this
21
22 compounded their feelings.
23

24
25 “[The nurse] said she screened a woman with COPD who then cried and cried and
26
27 then refused help and said she would sort herself out. This woman refused support
28
29 and refused to quit smoking. Then she screened a man who was overweight and
30
31 she'd just told him how serious his weight was and he cried about his weight and
32
33 then she offered support with mood and weight loss and he said no. So she said
34
35 most often it opens a can of worms, is demanding and difficult and rarely does
36
37 anything come of it.” Field notes practice B
38

39 *Patients being unaware of depression risk or case-finding taking place*

40
41
42 Many patients screened did not see themselves as the type of people who would be prone to
43
44 depression and did not understand why they were asked. They appreciated the idea that
45
46 people should experience case-finding for depression but distanced themselves from the
47
48 identity of those people. This sometimes led to defensive or even defiant answers, or
49
50 deflecting questions with humour in an apparent attempt to illustrate how preposterous it was
51
52 to suspect that they might be suffering from depression. This contradictory position of
53
54 wanting everyone else to experience case-finding, seeing the purpose/necessity of asking
55
56 the questions but, in contrast, not feeling they should be screened and thus derided the
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2
3 process or made light of it. This illustrates that the case-finding process in itself does not
4
5 impact on patient self-perception of who may suffer from depression and thus does not
6
7 enable them to answer the questions honestly and openly. They were concerned that they
8
9 were being seen as someone who could not cope. This especially occurred when the
10
11 patient felt they had needed to be defensive over their lifestyle choices, such as diet,
12
13 exercise, alcohol consumption, just before being screened. The review was seen as a
14
15 'telling off' for not doing the right things which then made it difficult to answer subjective
16
17 questions about mood.

18
19 Nurse: *So during the past month have you been bothered by feeling down or*
20
21 *depressed or hopeless at all?*

22
23 Patient looks perplexed.

24
25 Patient: *I'm always...* (His voice cracks and pretends to cry and rub his eyes like a
26
27 child) *Am I heck!*

28
29 Fieldnote: Nurse shuffles in her seat and leans forward. She's smiling but not 100%
30
31 comfortable. Observation 24

32
33
34 Interviewed patients articulated the belief that the professionals would pick up mood
35
36 problems or not coping without the need for such questions. They felt being aware of
37
38 depression was important in a generalised context but it did not fit with who they were, and
39
40 so found it hard to understand in the context of a chronic disease review.

41
42
43 Patient: *I mean if you're, if you're down they don't have to ask, they know so they*
44
45 *start talking about it.* Interview 2

46
47
48 Several patients admitted difficulty with answering questions about mood within the chronic
49
50 disease review during the interviews. They did not feel it was the appropriate place to
51
52 discuss mood and that the chronic disease review took over the consultation. Some
53
54 mentioned that they would like to be asked at a separate appointment just to cover mood,
55
56 although also understood the difficulties in achieving this.

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2
3 *“Just the fact that it’s like a, a review appointment and that I’m under time pressure*
4 *so it’s not, I feel like if I am to be asked about like depression and something like that,*
5 *there has to be a separate one (I: right) or like something depression, or like mood,*
6 *sort of like mental illness or like anxiety or whatever, like related, an appointment*
7 *related specifically to that or like a clinic specifically related to that.” Interview 21*
8
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12

13 Patients were mostly unaware of the increased prevalence of depression in chronic illness,
14 although felt they understood why it might occur. They suggested that introducing the case-
15 finding questions following an explanation that depression was more common in chronic
16 illness might facilitate disclosure; this rarely happened in practice.
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22 *Researcher: So when the nurse asks you about your mood... just like I’m trying to*
23 *imagine your perspective, why do you think that she’s asking these questions*
24 *usually when you get asked?*
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26
27
28

29 *Patient: I don’t know really, I didn’t know whether it was because of my history [of*
30 *depression] or... I didn’t realise that people with heart problems and diabetes get*
31 *depressed. I suppose if you’re not well or you’ve got on going things with you, I*
32 *suppose it can depress you.” Interview 44*
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38 *Competing practice priorities and inconsistent lines of communication around the*
39 *management of potential cases of depression*
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43 Practices varied in how they prioritised and organised case-finding for depression. Some
44 practices devoted a lot of time and energy whilst others considered that some elements of
45 QOF, such as the depression indicators, required too much effort for too little gain.
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50 *Field notes, Practice B: This leads to a debate over the decision between QOF*
51 *payments and the work put in to achieve those payments. GPs are saying they*
52 *should “choose their battles.”*
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3 One practice did not concentrate on QOF at all and offered a different style of practice to
4 their patients, with patients being seen as and when they wanted and most staff being
5 unaware of the QOF domains and items needed, or where to find them on the computer
6 system. Despite this, the nursing staff still used the QOF template to conduct the chronic
7 disease reviews.
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13
14 “I ask how many patients haven’t been screened for depression in the last 15months.

15
16 No one knows how to find this out (including the Practice Manager and the IT guy).”

17
18 Field notes Practice J

19
20 Five out of 63 patients screened positive; practices subsequently acted on one of these.
21
22 Two patients who screened negative subsequently consulted to seek help for mood
23 problems. Our follow up highlighted inconsistent systems and lines of communication within
24 practices for dealing with screen-positive patients. Although GPs were aware that nursing
25 staff undertook case finding, many did not know how a positive screen would be
26 communicated to them. Nurses assumed that GPs reviewed the case-finding outcome when
27 seeing patients following reviews but this was seldom the case. For example, one patient
28 who screened positive was asked to return a PHQ9 which indicated moderate depression
29 symptoms. This was filed without notification to a GP and only picked up on our clinical
30 record review.
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41 Practices in areas with less deprivation seemed more likely to have a specified system for
42 following up positive case-finding results.
43
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46 “[The nurse] said if they answered they were depressed she’d do the PHQ9 with
47 them and make them an appointment to see the Dr but she felt the Dr wouldn’t do
48 anything for them and doing the PHQ9 makes her run late so she’s conflicted
49 about how useful it is to screen if you feel no one cares about the result.” Field
50 notes Practice A
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3 “[The doctor] said she didn’t really look at the mental health stuff. I said *“Is there like a*
4 *system in place or does a score of two trigger anything, or?”* and she said *“no, maybe*
5 *we need to look at that.”* But she left it there.” Field notes Practice F
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10 11 **Discussion**

12
13 Case-finding for depression did not naturally fit within primary care consultations. It
14 appeared to augment discordance between professionals and patients. Professionals
15 struggled to align case-finding with a person-centred approach and were wary of the risk of
16 patients’ emotional issues derailing routine reviews. Professionals believed it was good to
17 ask about mental health but disliked the structure of the PHQ-2 and feeling forced to add it to
18 consultations. They subsequently responded by going ‘off script’ or discounting cues.
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24 Patients sometimes did not understand why the case-finding questions were being asked, or
25 did not see themselves as the type of people prone to depression. This led to defensiveness
26 or even defiance in their responses, especially if not anticipated as part of their review.
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30 Practice responses to case finding outcomes were haphazard, which may have reflected
31 professional ambivalence towards depression case-finding and the available treatment
32 options for those identified as having depression.
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38 Case-finding for depression exemplifies what happens when attempts are made to fit
39 apparently straightforward but deceptively complex interventions into primary care
40 consultations and systems. Previously, only anecdotal evidence suggested that
41 implementing case-finding was more difficult than intended [34]. This study provides clear
42 evidence to the barriers faced by professionals and patients in implementing depression
43 case-finding in practice, as well as observational data of what actually happens in practice
44 that both parties may not be aware of. Implementing depression case-finding is different to
45 other QOF targets as the topic itself is subject to significant stigma from both parties.
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55 This study provides the strongest evidence yet that the principle of interrupting the flow of
56 clinical conversation to ask out-of-context questions about sensitive issues has many
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3 significant barriers in clinical consultations. Much has been written about how QOF checklist
4 approaches have disrupted consultation flows and led to the patient agenda being unheard
5 [35-38]. This is part of a wider phenomenon. For example, Rousseau *et al* demonstrated
6 how a set of computerised prompts conflicted with established consultation processes [39].
7 Adding the case-finding questions to these processes is inappropriate when the scripts and
8 protocols have already created discordance between agendas. Such experience highlights
9 the need for systematic development and evaluation of such interventions to ensure
10 acceptability and feasibility before wider roll-out [40]. Despite their apparent simplicity, our
11 study has shown that depression case-finding questions were not implemented consistently
12 within consultations and practice routines.

13
14 Our findings also help explain the lack of benefit of case-finding when it is implemented
15 outside of collaborative care models [14]. We identified mixed attitudes towards case-finding
16 amongst both professionals and patients, coupled with the absence of agreed pathways for
17 patient follow-up and management. Collaborative care, with explicit monitoring and
18 structured management of both physical and mental health problems could help alleviate
19 some of the barriers identified in this study.

20
21 Study limitations mainly related to the nature of our observations, and sampled practices.
22 We were aware of the intrusive nature of observation and the likelihood that people behaved
23 differently when under observation. For example, professionals may have made more of an
24 effort to ask the PHQ2 questions sensitively, or ask them at all. When possible, observation
25 began following a period of familiarisation to allow the healthcare professional to grow used
26 to the researcher's presence. A week may also be insufficient to fully understand all practice
27 processes and relationships; however, similar approaches have produced substantial
28 insights into healthcare organisational behaviour elsewhere [41]. Even allowing for these
29 limitations, it is striking how often professionals did deviate from recommended practice.
30 Professionals and patients are often used to the presence of a third party during
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3 consultations for training purposes, although some of the nurses observed did comment on
4 feeling under pressure to demonstrate that they were following procedures correctly.
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8 The generalizability of our findings may be limited given that this study took place within one
9 geographical area. However, Leeds is typical of UK cities in terms of social deprivation
10 indices, demographics, characteristics of primary care services and distribution of common
11 diseases such as CHD and diabetes [42]. Furthermore, we sampled a relatively diverse
12 range of practices and found that practice characteristics, such as deprivation and QOF
13 achievement, affected how case-finding was approached. Opportunistic case findings were
14 under-represented in our sample of 63 consultations but we did not find any systematic
15 differences from chronic disease review case findings in our analysis.
16
17

18
19 We identified a range of problems with incentivised screening for depression. Our
20 accompanying interrupted time series analysis indicates that incentivised case-finding did
21 change clinical behaviour, increasing new depression-related diagnoses and, compared with
22 untargeted patients with chronic illness, perpetuated increasing rates of antidepressant
23 prescribing [29]. It is difficult to predict with any confidence whether greater changes would
24 have occurred if case-finding had been applied with greater fidelity. However, our findings
25 have broader implications for efforts to improve detection of depression in people with
26 chronic illness.
27
28

29
30 Specifically, all of patients, professionals and healthcare systems need to be prepared in
31 advance of case-finding. Firstly, for patients, experience with the diagnostic disclosure of
32 illnesses such as dementia and cancer suggests that acceptance is facilitated by a series of
33 negotiated steps rather than a 'one-off' process [43 44]. For example, patients in our study
34 indicated they would have been more receptive to case-finding had they received
35 information beforehand about the higher prevalence of depression in chronic physical illness.
36
37 It is also possible that the act of case-finding does form an initial step in helping patients
38 consider and come to terms with a diagnosis of depression, given that we found screen
39 negative patients subsequently consulted with mood problems. Secondly, professional
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3 attitudes towards and skills required in the detection of depression need to be examined.
4
5 Some voiced unease about whether they were incorporating the questions correctly within
6
7 consultations or uncertainty about how to handle potential new diagnoses, particularly
8
9 nursing staff. Thirdly, resources and care pathways need to be optimised to accommodate
10
11 detection and follow up. Patients identified through case-finding are more likely to have
12
13 mild-moderate rather than severe depression and less likely to benefit from antidepressant
14
15 treatment [45 46]. Resources are needed to manage those identified through case-finding
16
17 recommended by clinical guidelines. Health professionals were understandably reluctant to
18
19 open up a “can of worms” during tightly restricted chronic illness reviews; the exploration of
20
21 sensitive issues requires greater flexibility in consultation time. We also found instances
22
23 where screen-positives were not acted upon given the absence of explicitly agreed pathways
24
25 within practices.
26

27
28 There are more general lessons beyond depression detection. Mood disorders are not the
29
30 only sensitive issue raised during chronic illness reviews. Our findings should prompt a
31
32 reappraisal of how such reviews are designed and implemented for other emotionally-laden
33
34 problems integral to chronic illness care, such as weight management, sexual dysfunction
35
36 and alcohol misuse [47]. Health professionals may welcome structured protocols to help
37
38 ensure coverage of key issues; there is evidence that prompting interventions have a small
39
40 to modest effect on practice and patient outcomes [48]. However, such approaches have
41
42 been less successful in addressing relatively complex clinical behaviours, especially for
43
44 chronic illness management [49]. The subsequent challenge for quality improvement
45
46 programmes and research is to further explore and evaluate how to develop interventions
47
48 which can be embedded within primary care systems and consultations to improve
49
50 population outcomes whilst preserving patient-centred care. The National Institute for Health
51
52 and Care Excellence guidance on implementation recommends direct observation of
53
54 practice as one way to identify potential barriers to changing practice [50] and although we
55
56 have demonstrated the value of direct observation in evaluating new policy initiatives
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3 compared to (say) interview studies alone, it is not routinely undertaken when introducing
4 new QOF indicators[11].
5
6

7 Incentivised case-finding exacerbated tensions between perceived patient-centredness and
8 the time-limited routine of the consultation. Both professionals and patients reacted to the
9 imposition of case-finding by adapting, or even subverting, the process recommended by
10 national guidance. Despite their apparent simplicity, the case-finding questions are not
11 consultation-friendly, and acceptable alternative ways to raise mood disorders merit further
12 exploration, as well as guidance on how to introduce the questions so patients don't feel
13 depression is something that happens to 'other people' as our patient's awareness theme
14 suggests. If case-finding is to be recommended for other patient groups, practice teams
15 need clearer guidance on the pathway for people with likely depression which can be
16 accommodated within available systems and resources.
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29 **What is already known on this topic**

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- Case-finding for depression was incentivised in UK primary care to increase depression diagnosis and management.
 - Evidence that case-finding has improved depression outcomes is lacking and health care professionals have expressed dissatisfaction with its implementation.

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41 **What this study adds**

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- Patients and health care professionals subverted the standardised process of depression case-finding to suit their consultation style and needs.
 - Case-finding needs to be aligned with structured care processes and how healthcare professionals and patients think about mood problems in chronic physical disease.

Ethics Approval

This study was approved by the South West - Exeter Research Ethics Committee (reference 11/SW/0335). The participants gave informed consent before taking part.

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Transparency Declaration

Dr Sarah L Alderson, the lead author (the manuscript's guarantor), affirms that the manuscript is an honest, accurate, and transparent account of the study being reported; that no important aspects of the study have been omitted; and that any discrepancies from the study as planned have been explained.

Data sharing statement

Data sharing: no additional data available.

Contributorship Statement

RF and AH conceived the project. RF was principal investigator. SA and KM designed the study. SA and AR were responsible for running the project. AR was responsible for data collection. All authors interpreted the data and findings. SA wrote the first draft of the manuscript. RF commented on the first draft and all authors commented on further revisions. SA is guarantor of the paper.

Competing interests

All authors received funding from National Institute of Health Research to undertake this study.

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References

1. Goldney RD, Phillips PJ, Fisher LJ, et al. Diabetes, Depression, and Quality of Life. *Diabetes Care* 2004;**27**(5):1066-70 doi: 10.2337/diacare.27.5.1066[published Online First: Epub Date] | .
2. Rudisch B, Nemeroff CB. Epidemiology of comorbid coronary artery disease and depression. *Biological Psychiatry* 2003;**54**(3):227-40
3. Carney RM, Freedland KE, Miller GE, et al. Depression as a risk factor for cardiac mortality and morbidity: A review of potential mechanisms. *Journal of Psychosomatic Research* 2002;**53**(4):897-902
4. Anderson RJ, Freedland KE, Clouse RE, et al. The Prevalence of Comorbid Depression in Adults With Diabetes: A meta-analysis. *Diabetes Care* 2001;**24**(6):1069-78 doi: 10.2337/diacare.24.6.1069[published Online First: Epub Date] | .
5. Simon GE, VonKorff M. Recognition, management, and outcomes of depression in primary care. 1995(2):99-105
6. Barth J, Schumacher M, Herrmann-Lingen C. Depression as a Risk Factor for Mortality in Patients With Coronary Heart Disease: A Meta-analysis. *Psychosom. Med.* 2004;**66**(6):802-13 doi: 10.1097/01.psy.0000146332.53619.b2[published Online First: Epub Date] | .
7. Katon W, Ciechanowski P. Impact of major depression on chronic medical illness. *Journal of Psychosomatic Research* 2002;**53**(4):859-63
8. National Institute of Clinical Excellence. Depression in adults with a chronic physical health problem: treatment and management. NICE. : NICE, 2009.
9. New Zealand Guidelines Group. Identification of Common Mental Disorders and Management of Depression in Primary Care. An Evidence-based Best Practice Guideline. Wellington, 2008.
10. US Preventative Services Task Force. Screening for Depression in Adults: U.S. Preventive Services Task Force Recommendation Statement. *Annals of Internal Medicine* 2009;**151**(11):784-92 doi: 10.1059/0003-4819-151-11-200912010-00006[published Online First: Epub Date] | .
11. University of Birmingham and University of York Health Economics Consortium. NM49 indicator development feedback report 2012.
12. BMJ Best Practice. Screening: Patient Health Questionnaire-2 (PHQ-2). *BMJ Best Practice* 2010. <http://bestpractice.bmj.com/best-practice/monograph/55/prevention.html>.
13. Health and Social Care Information Centre. Quality Outcomes Framework 2012/13 results. Secondary Quality Outcomes Framework 2012/13 results 2013. <http://qof.hscic.gov.uk/index.asp>.
14. Gilbody S, Sheldon T, House A. Screening and case-finding instruments for depression: a meta-analysis. *Canadian Medical Association Journal* 2008;**178**(8):997-1003 doi: 10.1503/cmaj.070281[published Online First: Epub Date] | .
15. Dowrick C, Buchan I. Twelve month outcome of depression in general practice: does detection or disclosure make a difference? *BMJ* 1995;**311**(7015):1274-76
16. Gilbody SM, House A, Sheldon T. Screening and case finding instruments for depression [Systematic Review]. *Cochrane Database of Systematic Reviews* 2009;**3**:3
17. Pignone MP, Gaynes BN, Rushton JL, et al. Screening for Depression in Adults: A Summary of the Evidence for the U.S. Preventive Services Task Force. *Annals of Internal Medicine*

- 2002;**136**(10):765-76 doi: 10.7326/0003-4819-136-10-200205210-00013[published Online First: Epub Date]].
18. Gilbody S, Sheldon T, Wessely S. Should we screen for depression? *BMJ* 2006;**332**(7548):1027-30 doi: 10.1136/bmj.332.7548.1027[published Online First: Epub Date]].
19. National Screening Committee. Programme Appraisal Criteria. Secondary Programme Appraisal Criteria 2013. www.screening.nhs.uk/criteria.
20. Serumaga B, Ross-Degnan D, Avery A, et al. Effect of pay for performance on the management and outcomes of hypertension in the United Kingdom: interrupted time series study. *BMJ* 2011;**342**:d108
21. Campbell SM, Reeves D, Kontopantelis E, et al. Effects of Pay for Performance on the Quality of Primary Care in England. *N Engl J Med* 2009;**361**:368-78
22. Scott A, Sivey P, Ait Ouakrim D, et al. The effect of financial incentives on the quality of health care provided by primary care physicians. *Cochrane Database Syst Rev* 2011(9):CD008451
23. Checkland K, Harrison S, McDonald R, et al. Biomedicine, holism and general medical practice: responses to the 2004 General Practitioner contract. *Sociology of Health and Illness* 2008;**30**:788-803
24. McDonald R, Harrison S, Checkland K, et al. Impact of financial incentives on clinical autonomy and internal motivation in primary care: ethnographic study. *BMJ* 2007;**334**(7608):1333-34
25. Maisey S, Steel N, Marsh R, et al. Effects of payment for performance in primary care: qualitative interview study. *Journal of Health Services Research & Policy* 2008;**13**(3):133-39 doi: 10.1258/jhsrp.2008.007118[published Online First: Epub Date]].
26. Mitchell C, Dwyer R, Hagan T, et al. Impact of the QOF and the NICE guideline in the diagnosis and management of depression: a qualitative study. *Br. J. Gen. Pract.* 2011;**61**(586):e279-e89 doi: 10.3399/bjgp11X572472[published Online First: Epub Date]].
27. Coventry PA, Hays R, Dickens C, et al. Talking about depression: a qualitative study of barriers to managing depression in people with long term conditions in primary care. *BMC Fam Pract* 2011;**12**:10 doi: 10.1186/1471-2296-12-10[published Online First: Epub Date]].
28. Dowrick C, Leydon GM, McBride A, et al. Patients' and doctors' views on depression severity questionnaires incentivised in UK quality and outcomes framework: qualitative study. *Br. Med. J.* 2009;**338**:6 doi: b663
10.1136/bmj.b663[published Online First: Epub Date]].
29. McLintock K, Russell A, West R, et al. Effect of financial incentives on screening for depression in patients with chronic disease in the United Kingdom: an interrupted time series study. Manuscript in preparation 2013
30. Practitioners RCoG. Supporting Carers: An action guide for general practitioners and their teams.: Royal College of General Practitioners, 2011.
31. Burden AD, Boon MH, Leman J, et al. Diagnosis and management of psoriasis and psoriatic arthritis in adults: summary of SIGN guidance. *BMJ* 2010;**341** doi: 10.1136/bmj.c5623[published Online First: Epub Date]].
32. Collier F, Smith RC, Morton CA. Diagnosis and management of hidradenitis suppurativa. *BMJ* 2013;**346** doi: 10.1136/bmj.f2121[published Online First: Epub Date]].
33. Emerson RM, Fretz RI, Shaw LL. *Writing ethnographic fieldnotes*. 2nd ed: University of Chicago Press, 2011.

- 1
2
3 34. Anekwe L. QOF depression indicators face axe. Pulse 2011(June 2011)
- 4
5 35. Chew-Graham CA, Hunter C, Langer S, et al. How QOF is shaping primary care review
6 consultations: a longitudinal qualitative study. BMC Fam Pract 2013;**14**(1):103
- 7
8 36. Campbell SM, McDonald R, Lester H. The experience of pay for performance in English family
9 practice: a qualitative study. Annals of Family Medicine 2008;**6**(3):228-34
- 10
11 37. Hannon KL, Lester HE, Campbell SM. Patients' views of pay for performance in primary care: a
12 qualitative study. Br. J. Gen. Pract.;**62**(598):e322-e28 doi: 10.3399/bjgp12X641438[published
13 Online First: Epub Date]].
- 14
15 38. Lester H, Matharu T, Mohammed MA, et al. Implementation of pay for performance in primary
16 care: a qualitative study 8 years after introduction. Br. J. Gen. Pract. 2013;**63**(611):e408-e15
17 doi: 10.3399/bjgp13X668203[published Online First: Epub Date]].
- 18
19 39. Rousseau N, McColl E, Newton J, et al. Practice based, longitudinal, qualitative interview study of
20 computerised evidence based guidelines in primary care. BMJ 2003;**326**(7384):314 doi:
21 10.1136/bmj.326.7384.314[published Online First: Epub Date]].
- 22
23 40. Craig P, Dieppe P, Macintyre S, et al. Developing and evaluating complex interventions: the new
24 Medical Research Council guidance. BMJ 2008;**337** doi: 10.1136/bmj.a1655[published Online
25 First: Epub Date]].
- 26
27 41. Dixon-Woods M, Leslie M, Bion J, et al. What Counts? An Ethnographic Study of Infection Data
28 Reported to a Patient Safety Program. Milbank Quarterly 2012;**90**(3):548-91 doi:
29 10.1111/j.1468-0009.2012.00674.x[published Online First: Epub Date]].
- 30
31 42. Public Health England. National General Practice Profiles - Leeds PCT. Secondary National
32 General Practice Profiles - Leeds PCT 2013.
33 [http://www.apho.org.uk/PracProf/Profile.aspx#mod,2,pyr,2012,pat,2,par,E16000074,are,-](http://www.apho.org.uk/PracProf/Profile.aspx#mod,2,pyr,2012,pat,2,par,E16000074,are,-sid1,2000002,ind1,243-4,sid2,2000005,ind2,-)
34 [sid1,2000002,ind1,243-4,sid2,2000005,ind2,-](http://www.apho.org.uk/PracProf/Profile.aspx#mod,2,pyr,2012,pat,2,par,E16000074,are,-sid1,2000002,ind1,243-4,sid2,2000005,ind2,-)
- 35
36 43. Fallowfield L, Jenkins V. Effective communication skills are the key to good cancer care. European
37 journal of cancer (Oxford, England : 1990) 1999;**35**(11):1592-7
- 38
39 44. Lecouturier J, Bamford C, Hughes J, et al. Appropriate disclosure of a diagnosis of dementia:
40 identifying the key behaviours of 'best practice'. BMC Health Services Research 2008;**8**(1):1-
41 10 doi: 10.1186/1472-6963-8-95[published Online First: Epub Date]].
- 42
43 45. Coyne JC, Schwenk TL, Fechner-Bates S. Nondetection of depression by primary care physicians
44 reconsidered. General Hospital Psychiatry 1995;**17**(1):3-12 doi:
45 [http://dx.doi.org/10.1016/0163-8343\(94\)00056-J](http://dx.doi.org/10.1016/0163-8343(94)00056-J)[published Online First: Epub Date]].
- 46
47 46. Arroll B, Goodyear-Smith F, Crengle S, et al. Validation of PHQ-2 and PHQ-9 to screen for major
48 depression in the primary care population. Ann Fam Med 2010;**8**(4):348-53 doi:
49 10.1370/afm.1139[published Online First: Epub Date]].
- 50
51 47. Crosson JC, Heisler M, Subramanian U, et al. Physicians' Perceptions of Barriers to Cardiovascular
52 Disease Risk Factor Control among Patients with Diabetes: Results from the Translating
53 Research into Action for Diabetes (TRIAD) Study. The Journal of the American Board of
54 Family Medicine 2010;**23**(2):171-78 doi: 10.3122/jabfm.2010.02.090125[published Online
55 First: Epub Date]].
- 56
57 48. Shojania Kaveh G, Jennings A, Mayhew A, et al. The effects of on-screen, point of care computer
58 reminders on processes and outcomes of care. Cochrane Database of Systematic Reviews
59 2009; (3). <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD001096.pub2/abstract>.
- 60
61 49. Grimshaw JM, Eccles MP, Lavis JN, et al. Knowledge translation of research findings.
62 Implementation Science 2012;**7**(50):1-29

1
2
3 50. National Institute for Health and Care Excellence. Into practice guide: Using NICE guidance and
4 quality standards to improve practice, 2013.
5
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Table 1 – Observed practice characteristics

Surgery	QOF score*	List Size*	Deprivation Score*	Patients Recruited
Practice A	Low	Low	Low	3
Practice B	Low	High	High	13
Practice C	Low	High	Low	5
Practice D	High	High	Low	6
Practice E	High	High	High	6
Practice F	High	Low	High	5
Practice G	Low	High	Low	5
Practice H	Low	Low	Low	5
Practice I	High	High	Low	4
Practice J	Low	Low	High	5
Practice K	Low	Low	High	4
Practice L	High	Low	Low	2

* Compared to Primary Care Trust median

Table 2 - Patient demographics in observed consultations

	<u>No. of patients</u>	<u>% of patients</u>
<u>Gender</u>		
Female	21	33%
Male	42	67%
<u>Age group</u>		
18-30	7	11%
31-50	5	8%
51-64	18	29%
65-79	28	44%
80+	5	8%
<u>Chronic Illness</u>		
CHD	13	21%
DM	46	73%
CHD & DM	4	6%
<u>Ethnicity</u>		
White British	49	78%
Mixed British	1	2%
White Irish	2	3%
Chinese	1	2%
Black Caribbean	5	8%
Pakistani	3	5%
British Asian	1	2%
Indian	1	2%
<u>Previous diagnosis of depression</u>		
Yes	9	14%
No	54	86%

Figure 1. Flow chart of idealised depression case-finding process and barriers identified.

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Incentivised case finding for depression in patients with chronic heart disease and diabetes in primary care: an ethnographic study

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Abstract

Objective-

To examine the process of case-finding for depression in people with diabetes and coronary heart disease within the context of a pay-for-performance scheme.

Design

Ethnographic study drawing upon observations of practice routines and consultations, debriefing interviews with staff and patients, and review of patient records.

Setting

General practices in Leeds, United Kingdom.

Participants-

Twelve purposively sampled practices with a total of 119 staff; 63 consultation observations; and 57 patient interviews.

Main outcome measure-

Audio-recorded consultations and interviews with patients and health care professionals

along with observation field notes were thematically analysed using a constant

comparison and contrastive approach. We assessed outcomes of screening case-

finding from patient records.

Results-

Case-finding exacerbated the discordance between patient and professional agendas, the

latter already dominated by the need for a tightly structured and time-limited interaction to

document performance nature of chronic illness reviews. Professional beliefs and abilities

affected how case-finding was undertaken; there was uncertainty about how to ask the

questions, particularly amongst nursing staff. Professionals were often wary of opening an

emotional "can of worms." Subsequently, patient responses potentially suggesting emotional

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7 problems could be prematurely shut down by professionals. ~~Screened patients~~Patients did
8 not understand why they were asked questions about depression. This sometimes led to
9 defensive or even defiant answers to case-finding. Follow up of patients highlighted
10 inconsistent systems and lines of communication for dealing with screened positive cases.
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13 14 *Conclusions*

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16 Case-finding does not fit naturally within consultations; both professional and patient
17 reactions somewhat subverted the process recommended by national guidance. Quality
18 improvement strategies will need to take account of our results in two ways. First, despite
19 their apparent simplicity, the case-finding questions are not consultation-friendly, and
20 acceptable alternative ways to ~~encourage raising~~raise the issue of depression need to be
21 supported. Second, ~~practice teams need clearer guidance on the pathway for people~~
22 ~~with likely depression~~case-finding needs to operate structured pathways which can be
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29 accommodated within available systems and resources.
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31 32 **Strengths and limitations of this study**

33 34 **Strengths**

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36 • Multi-site ethnography of ~~typical~~broadly representative general practices
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38 • Triangulation through use of multiple sources of data

39 40 **Limitations**

- 41
42 • Potential for clinician and patient behaviour to alter as a response to being observed
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44 • Short periods of observation in each practice limiting range of types of behaviour
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46 observed
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48 • Observations within one geographical area, thereby potentially limiting
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50 generalisability
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Introduction

The detection and management of depression associated with chronic physical illness represents a major challenge for primary care. Depression affects around a third of people with twice as common in those with chronic physical illness such as coronary heart disease (CHD) and a quarter of those with diabetes compared to those without chronic physical illness [1-4]. Such co-morbidity can make depression hard to recognize, especially as symptoms of depression (such as fatigue) overlap with those of chronic physical illnesses [5]. Co-morbidity is also associated with poorer outcomes, including mortality [3 6 7]. One response is case-finding, defined as selective screening for depression in populations at high risk, such as those with chronic illness. This has been recommended by national guidance in the UK [8] and elsewhere. [9 10]. The Quality Outcomes Framework (QOF), a pay-for-performance scheme in UK primary care, rewarded depression case-finding using two standard screening questions from the Patient Health Questionnaire-2 (PHQ-2) in all patients with coronary heart disease (CHD) or diabetes [11]. The PHQ-2 asks: 'In the past two weeks, have you been bothered by: Little interest or pleasure in doing things; and feeling down, depressed or hopeless?' [12]. Routine data suggested high levels of screening, with a national average of 86% of eligible patients screened in 2011-12 [13].

However, there are problems with both the rationale underpinning this recommendation and the means undertaken to promote its implementation in the UK.

Firstly, there is no evidence that screening case-finding for depression by itself improves patient outcomes [14]. For screening case-finding to be effective it is important that case finding-detected potential cases are further assessed, diagnosed and offered appropriate clinical management within a structured clinical pathway [15-17]. There is no closely allied incentive in the QOF programme for subsequent patient care. There was no closely allied incentive in the QOF programme for subsequent patient care. Case-finding

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7 should also be considered against other recommended criteria for screening tests, such as
8 acceptability and having an agreed policy about whom to treat as patients [18 19].

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10 Secondly, evidence on the effects of financial incentives on primary care practice is, at best,
11 mixed ~~[18-20]~~[20-22]. There are concerns that such incentives undermine professionals'
12 intrinsic motivation, patient-centeredness, and continuity of care and have led to a 'tick box'
13 culture as health professionals work through checklists for chronic illness management ~~[19~~
14 ~~24-23]~~[21 23-25]. Health professionals themselves have expressed dissatisfaction with
15 incentivised depression management, particularly the use of incentivised depression severity
16 measurements, [24-25][26-28].

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18 Our accompanying interrupted time series analysis found that incentivised case finding
19 increased new depression-related diagnoses in people with diabetes and CHD and
20 perpetuated rising trends in new prescriptions of antidepressants, ~~[26]. Even though this~~
21 ~~incentivised case finding stopped~~[29]. Even though this incentivised case finding ceased,
22 in 2012, there are continuing calls for 'something to be done' to detect and treat depression
23 in high risk groups ~~[27-29]~~[30-32]. However, the professional and patient experiences of
24 incentivised case-finding, how it affected clinical care, and its fit with the routines of practice
25 life are poorly understood. We investigated the process of incentivised case-finding during
26 scheduled and opportunistic reviews of patients with diabetes and CHD.

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41 **Methods**

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43 *Design and setting*

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45 Our ethnographic design combined direct observation with interviews and review of patient
46 records. We wanted to build an in-depth understanding of how patient case-finding was
47 conducted within the context of everyday practice life and routine patient care. The study
48 took place in general practices in Leeds, UK.

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Participants

We invited all practices in Leeds to participate. We then sought a purposive sample of practices using a four-by-two sampling frame based upon whether practice QOF achievement was above or below the Leeds median, further stratified by list size and deprivation profiles. Practices that consented to participate were booked for a week of observation, during which we aimed to observe at least three consultations.

Practices sent letters of invitation and information packs to patients scheduled for chronic disease reviews within the observation week. We also approached patients attending for routine consultations to enable observation of opportunistic case-finding. Practice staff identified patients due to be asked the case-finding questions and asked if they would be interested in participating when they arrived at reception for their appointment. All patients and professionals subsequently observed gave informed consent.

Data collection and analysis

An ethnographer (AR) used a funnelling approach to observe and describe the context of and behaviours within the practice [30][33], moving to detailed observation and audio-recording of consultations. Observation considered both verbal and non-verbal features including: how case-finding questions are framed and asked; events leading up to questioning; patient verbal and non-verbal reactions and responses; and overall style of the consultation. This style of observation allowed the researcher to layer the analysis of the consultations with contextual information providing a richer interpretation of the observation data. She held semi-structured debriefing interviews with patients who had been observed ~~being screened~~. The interviews aimed to explore patient views on the process and experience of the consultation in further depth. Unstructured interviews took place with the health care professionals involved in depression case-finding and notes taken on all discussions regarding depression case-finding. We reviewed patients' medical records six weeks after ~~observed screening~~ observation to check for any subsequent clinical events

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related to depression identification and management. Events included appointments where mood was discussed, telephone consultations, depression severity assessments, referrals to mental health teams or talking therapies and new prescriptions for depression medication.

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The perceived relative importance and organisation of QOF-related case-finding may vary throughout the year. To partly ameliorate this we observed two practices towards the end of the financial year when practices are typically working hardest to achieve QOF targets.

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Transcribed data (interviews, observation transcripts and observation notes) were managed using NVivo9 and coded for themes. Thematic analysis was undertaken by two researchers, independently coding for the themes and then comparing codes and themes. The analysis was further refined by using constant comparison and contrastive approach of themes, and looking for negative cases in order to examine for similarities and differences within and between the patients' perception and observations in different centres. Finally, to improve reliability and validity of data, we triangulated findings from all three data sources.

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Ethical review

The study was approved by National Research Ethics Service Committee South West – Exeter (11/SW/0335).

Results

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Twelve practices participated and a total of 63 patient consultations were observed (range 2-13 per practice; Table 1). Practice characteristics were relatively balanced, with five having QOF achievement above the median for Leeds, five above median population deprivation scores, and six above median list size. Patients were mostly most commonly male, age 51-79 years, and white British (Table 2). Most (79.73%) participants had diabetes and nine (14%) had a previous diagnosis of depression. Nine of the observed case findings took place 'opportunistically' within routine GP appointments. The rest occurred within dedicated chronic disease clinics, usually with nurses.

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7 ~~Six key themes emerged~~Based upon available guidance, observations and interviews, we
8
9 ~~constructed a basic normative model of the process by which case-finding was expected to~~
10 ~~improve depression detection and treatment (Figure 1). We then identified a number of~~
11 ~~ways in which professional and patient behaviours and beliefs and the working patterns of~~
12 ~~general practices subverted or affected the operation of this model. We found five barriers:~~

13
14
15
16 discordance between patient and professional agendas; professional ~~beliefs~~
17 ~~affecting~~uncertainty around how ~~screening was undertaken;~~to undertake the case-finding
18 ~~as opening~~itself; reluctance to open a “can of worms”; ~~patient existential beliefs affecting~~
19 ~~their responses;~~patients being unaware of depression risk or case-finding ~~as a means to~~
20 ~~reduce stigma~~taking place; and ~~competing~~ practice priorities and ~~organisation~~inconsistent
21 ~~lines of communication around the management of potential cases of depression.~~

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28 *Discordance between patient and professional agendas*

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30 Case-finding ~~exacerbated the discordance between the patient and professional~~
31 ~~agendas, the latter already dominated by the need for~~often occurred within tightly

32
33 structured and time-limited ~~interaction~~chronic illness reviews required to document QOF

34
35 processes ~~of care, and appeared to exacerbate existing discordance.~~ This led to

36
37 professionals disregarding attempts by patients to steer the consultation around to their own
38 perceived needs. Patients were often not focused on ~~and often did not understand the~~

39
40 ~~purpose of~~the review process and used the consultation as an opportunity to raise other

41
42 problems. ~~Professionals~~To manage this, ~~professionals~~often interrupted patients or

43
44 returned the consultation to its purpose, discounting clues that the patient had worries
45 related to the chronic disease being reviewed or other illnesses.

46
47 Patient: [talking about hypoglycaemic attacks] ~~which were a subject of significant~~

48
49 ~~anxiety for this patient (revealed in interview after appointment)]~~ Only time that I went

50
51 ~~funny, I had a tooth out and I'd had, I couldn't have any breakfast, or I didn't have any~~

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7 breakfast, because I don't like to be poorly when I've had teeth out, because I used
8 to be when I was younger, am I talking and disturbing...

9
10 [Fieldnote] Nurse is trying to measure blood pressure; patient looks agitated.

11
12 Nurse: Yes, I think you just probably need to just be quiet for a couple of minutes
13 while I check it, because it's even higher now! We want it to go down! Just try and
14 relax. OK. Observation 29

15
16
17
18 At this stage in the consultation the patient became distressed, apparently wishing to discuss
19 further their worries about hypoglycaemia. ~~This illustrates the restrictive context of~~
20 ~~disease reviews — in this case hampering further exploration of patient concerns that~~
21 ~~might have uncovered. The professional subsequently moved the conversation on to~~
22 ~~another QOF target and no follow up of concerns about hypoglycaemia was arranged. The~~
23 ~~patient later told the researcher she was extremely worried about hypos and was~~
24 ~~experiencing consistently low mood and high anxiety. The context of chronic illness reviews~~
25 ~~was restrictive – in this case an opportunity for direct, subject specific case-finding was~~
26 ~~missed because of the necessity to ask about and record other items. This represents a~~
27 ~~missed opportunity for case-finding at a point in the review when the patient might have~~
28 ~~been receptive to exploring~~ associated mood problems.

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38 Difficulties arose in the consultation when the patient mentioned something that was
39 perceived to be important but unrelated to the review. Sometimes the review had to be
40 abandoned as the patient's agenda became too important to be ignored, or the patient too
41 distressed to continue concentrating on the review. This more patient-centred approach
42 appeared to occur more often in practices that had lower than average QOF achievement,
43 suggesting that such practices traded off potential income against responsiveness to
44 patients.

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48 Professional ~~beliefs affecting uncertainty around~~ how to undertake the case-finding was
49 approached itself.

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Professional beliefs and abilities affected how case-finding was undertaken. ~~They~~
~~in conversation professionals~~ expressed uncertainty about how best to phrase and ask the
 questions, particularly nursing staff who ~~told the researcher they~~ sometimes felt insufficiently
 trained on how to manage patients ~~who screened positive. They~~ with possible depression.
~~When asked, they~~ questioned whether they were case-finding for QOF rather than patient
 benefit. ~~Professionals avoided directly asking screening~~ We noticed that those who felt
that the case-finding was for the benefit of patients appeared to work in practices that were
in areas of low deprivation, where as those in areas of higher deprivation felt there was a
lack of time to ask the questions ~~if they were familiar with patients but still recorded~~
~~case finding; they believed could identify~~ and deal with any responses that might indicate
~~a problem with~~ mood ~~changes through existing knowledge of patients. They often~~
~~adapted the questions to suit their consultation style or perceived patient needs. In~~
~~the context of a time-restricted consultation they felt overburdened.~~

~~Nurse: Then so do you feel ok about your diabetes, do you have any, do you worry~~
~~about it, does it bother you at all? Observation 27~~

Field notes Practice A: [The nurse] referred to QOF as coming from “*on high*” to tell her
 to incorporate it [case-finding]. She felt depression screening was problematic as they
 had received “*no training*” in mental health or in screening and they were very
 “*stretched for time in the appointment.*”

Opening ~~Professionals avoided directly asking case-finding questions if they were familiar~~
~~with patients but still recorded case-finding; they expressed beliefs that they could identify~~
~~mood changes through existing knowledge of patients. They often adapted the questions to~~
~~suit their consultation style or perceived patient needs.~~

Sometimes confusion arose when the questions were framed to ask whether the patient was
copng with their illness, rather than to assess mood disorders in general. The patient
answered that they were managing their condition well but did not talk about their mood.

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7 This was because the professionals believed the case-finding was to detect depression
8 associated with chronic disease only, not depression of any cause.

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10 *Nurse: Then so do you feel ok about your diabetes. do you have any. do you worry*
11 *about it. does it bother you at all? Observation 27*

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15 The case-finding questions were usually asked in the middle of chronic disease reviews.
16 Generally the templates for such reviews were followed in order, with depression case-
17 finding often occurring after discussion of alcohol consumption and smoking status. Once
18 asked, the professional would move on to discuss diet and exercise. The case-finding
19 questions appeared out of place in the consultation that mainly involved measuring physical
20 factors rather than mood related problems. When asked about the case-finding, most
21 nurses felt it was difficult to switch from asking something that could be measured (such as
22 weight, units of alcohol consumed) to something more subjective.

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30 *Reluctance to open a "can of worms"*

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32 Professionals at nearly every practice mentioned the term "can of worms" to express unease
33 with case-finding for depression. This metaphor indicated professional perceptions of both
34 patient discomfort with being asked about emotions and their own emotional labour in asking
35 the questions. "Can of worms" helped articulate the belief that case-finding for depression
36 was anticipated as a problematic part of the consultation and threatened to derail routines.
37 Professionals anticipated having to manage and close down answers before patients began
38 to give them; this often informed their immediate response to patients' answers regardless of
39 what patients said.

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46 Many felt that by identifying a problem, it was their duty to uncover further the scale of the
47 problem and to discuss this further with the patient, rather than requesting that the patient
48 should make an appointment to discuss this with the doctor or when there would be more
49 time to devote to this. It was hard to move the consultation onto the rest of the review. This
50 often led to the questions being asked in a manner that made it difficult for the patient to

answer 'yes', such as "you have no problems coping, do you?" pre-empting any difficulties the questions may cause.

"Then Nurse 1 said "it's a question that makes you sigh, makes your heart heavy, because you're there and you say "you've been down and depressed?" and she said "loads of them saying "yes" and she's thinking 'no, you're not, you're not, depressed, depressed, you're just a bit down, a bit fed up, aren't we all!' So then she has to say "Oh, why do you think that?" and it starts this 10 minute conversation that she really didn't want to be having, because she's had to do three blood pressure readings, loads of blood tests, trouble getting a vein, had to check their feet, loads of faffing around, she's only got 20 minutes." Field notes Practice F

Patients seldom answered with a simple "yes" or "no" and brought up specific difficulties, such as bereavement. Following an initial acknowledgement, professionals then tended to move consultations on without discussing the effects of these life events on mood. Therefore, professionals prematurely shut down patient responses suggesting emotional problems to reduce the risk of extended consultations.

Nurse: Are you alright, you haven't been having little interest in doing things, or?

Patient: No, no.

Nurse: Are you fine, are you okay? That's okay.

Patient: It's been 10 years since I've lost [woman's name].

Nurse: Is it, what, is that your wife?

Patient: Yes.

Nurse: 10 years? That's a long time, isn't it? Can I just check your tablets then, do you take aspirin, [lists medication]... Observation 23.

Patient existential beliefs affecting responses

Some health care professionals talked about the emotional labour involved in case-finding.

Discussing depression was seen as being emotionally difficult and required feeling strong in

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7 themselves, in order to cope with the answer. The emotional burden was exacerbated by
8 the professional's perception that regardless of the outcome of case-finding, there wouldn't
9 be in any change for the better for the patient. They perceived they were expending a great
10 deal of emotional labour on something that did not improve patient care and this
11 compounded their feelings.

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16 "[The nurse] said she screened a woman with COPD who then cried and cried and
17 then refused help and said she would sort herself out. This woman refused support
18 and refused to quit smoking. Then she screened a man who was overweight and
19 she'd just told him how serious his weight was and he cried about his weight and
20 then she offered support with mood and weight loss and he said no. So she said
21 most often it opens a can of worms, is demanding and difficult and rarely does
22 anything come of it." Field notes practice B

23 *Patients being unaware of depression risk or case-finding taking place*

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31 Many patients screened did not see themselves as the type of people who would be prone to
32 depression and did not understand why they were asked. ~~This sometimes led to~~
33 ~~defensive or even defiant answers, or deflecting questions with humour.~~ They
34 appreciated the idea that people should experience case-finding for depression but
35 distanced themselves from the identity of those people. This sometimes led to defensive or
36 even defiant answers, or deflecting questions with humour in an apparent attempt to
37 illustrate how preposterous it was to suspect that they might be suffering from depression.
38 This contradictory position of wanting everyone else to experience case-finding, seeing the
39 purpose/necessity of asking the questions but, in contrast, not feeling they should be
40 screened and thus derided the process or made light of it. This illustrates that the case-
41 finding process in itself does not impact on patient self-perception of who may suffer from
42 depression and thus does not enable them to answer the questions honestly and openly.
43 They were concerned that they were being seen as someone who could not cope. This

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especially occurred when the patient felt they had needed to be defensive over their lifestyle choices, such as diet, exercise, alcohol consumption, just before being screened. The review was seen as a 'telling off' for not doing the right things which then made it difficult to answer subjective questions about mood.

Nurse: *So during the past month have you been bothered by feeling down or depressed or hopeless at all?*

Patient looks perplexed.

Patient: *I'm always... (His voice cracks and pretends to cry and rub his eyes like a child) Am I heck!*

Fieldnote: Nurse shuffles in her seat and leans forward. She's smiling but not 100% comfortable. Observation 24.

Interviewed patients articulated the belief that the professionals would pick up mood problems or not coping without the need for such questions. They felt being aware of depression was important in a generalised context but it did not fit with who they were, and so found it hard to understand in the context of a chronic disease review.

Case finding as a means to reduce stigma

~~Patients and professionals often considered that regular discussions around mood and depression helped to reduce associated stigma. Patient: *I mean if you're, if you're down they don't have to ask, they know so they start talking about it.*~~

Interview 2

Several patients admitted difficulty with answering questions about mood within the chronic disease review during the interviews. They did not feel it was the appropriate place to discuss mood and that the chronic disease review took over the consultation. Some mentioned that they would like to be asked at a separate appointment just to cover mood, although also understood the difficulties in achieving this.

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“Just the fact that it’s like a, a review appointment and that I’m under time pressure so it’s not, I feel like if I am to be asked about like depression and something like that, there has to be a separate one (I: right) or like something depression, or like mood, sort of like mental illness or like anxiety or whatever, like related, an appointment related specifically to that or like a clinic specifically related to that.” Interview 21

Patients were mostly unaware of the increased prevalence of depression in chronic illness, although felt they understood why it might occur. They suggested that introducing the case-finding questions following an explanation that depression was more common in chronic illness might facilitate disclosure; this rarely happened in practice.

Researcher: *So when the nurse asks you about your mood... just like I’m trying to imagine your perspective, why do you think that she’s asking these questions usually when you get asked?*

Patient: *I don’t know really, I didn’t know whether it was because of my history [of depression] or... I didn’t realise that people with heart problems and diabetes get depressed. I suppose if you’re not well or you’ve got on going things with you, I suppose it can depress you.” Interview 44*

Practice priorities and organisation

Competing practice priorities and inconsistent lines of communication around the management of potential cases of depression

Practices varied in how they prioritised and organised case-finding for depression. Some practices devoted a lot of time and energy whilst others considered that some elements of QOF, such as the depression indicators, required too much effort for too little gain.

Field notes, Practice B: This leads to a debate over the decision between QOF payments and the work put in to achieve those payments. GPs are saying they should *“choose their battles.”*

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One practice did not concentrate on QOF at all and offered a different style of practice to their patients, with patients being seen as and when they wanted and most staff being unaware of the QOF domains and items needed, or where to find them on the computer system. Despite this, the nursing staff still used the QOF template to conduct the chronic disease reviews.

"I ask how many patients haven't been screened for depression in the last 15months.

No one knows how to find this out (including the Practice Manager and the IT guy)."

Field notes Practice J

Five out of 63 patients screened positive; practices subsequently acted on one of these.

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Two patients who screened negative subsequently consulted to seek help for mood problems. Our follow up highlighted inconsistent systems and lines of communication within practices for dealing with screen-positive patients. Although GPs were aware that nursing staff undertook case finding, many did not know how a positive screen would be communicated to them. Nurses assumed that GPs reviewed the case-finding outcome when seeing patients following reviews but this was seldom the case. For example, one patient who screened positive was asked to return a PHQ9 which indicated moderate depression symptoms. This was filed without notification to a GP and only picked up on our clinical record review.

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Field notes, Practice J: I ask how many patients haven't been screened for depression in the last 15months. No one knows how to find this out (including the Practice Manager and the IT guy).

Practices in areas with less deprivation seemed more likely to have a specified system for following up positive case-finding results.

"[The nurse] said if they answered they were depressed she'd do the PHQ9 with them and make them an appointment to see the Dr but she felt the Dr wouldn't do anything for them and doing the PHQ9 makes her run late so she's conflicted

about how useful it is to screen if you feel no one cares about the result.” Field notes Practice A

“[The doctor] said she didn’t really look at the mental health stuff. I said “Is there like a system in place or does a score of two trigger anything, or?” and she said “no, maybe we need to look at that.” But she left it there.” Field notes Practice F

Discussion

Case-finding for depression did not naturally fit within primary care consultations. It appeared to augment discordance between professionals and patients. Professionals struggled to align case-finding with a person-centred approach and were wary of the risk of patients’ emotional issues derailing routine reviews. Professionals believed it was good to ask about mental health but disliked the structure of the PHQ-2 and feeling forced to add it to consultations. They subsequently responded by going ‘off script’ or discounting cues. Patients sometimes did not understand why the case-finding questions were being asked, or did not see themselves as the type of people prone to depression. This led to defensiveness or even defiance in their responses, especially if not anticipated as part of their review. Practice responses to case finding outcomes were haphazard, which may have reflected professional ambivalence towards depression case-finding and the available treatment options for those identified as having depression.

Case-finding for depression exemplifies what happens when attempts are made to fit apparently straightforward but deceptively complex interventions into primary care consultations and systems. Previously, only anecdotal evidence suggested that implementing case-finding was more difficult than intended [34]. This study provides clear evidence to the barriers faced by professionals and patients in implementing depression case-finding in practice, as well as observational data of what actually happens in practice that both parties may not be aware of. Implementing depression case-finding is different to other QOF targets as the topic itself is subject to significant stigma from both parties.

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7 This study provides the strongest evidence yet that the principle of interrupting the flow of
8 clinical conversation to ask out-of-context questions about sensitive issues has many
9 significant barriers in clinical consultations. ⁴Much has been written about how QOF checklist

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11 approaches have disrupted consultation flows and led to the patient agenda being unheard

13 ~~[31-34]~~[35-38]. This is part of a wider phenomenon. For example, Rousseau *et al*

16 demonstrated how a set of computerised prompts conflicted with established consultation

17 processes ~~[35]~~[39]. Adding the case-finding questions to these processes is inappropriate

19 when the scripts and protocols have already created discordance between agendas. ⁵Such

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22 experience highlights the need for systematic development and evaluation of such

23 interventions to ensure acceptability and feasibility before wider roll-out ~~[36]. Despite their~~

24 ~~apparent simplicity, our study has shown that depression case~~ [40]. ~~Despite their~~

26 ~~apparent simplicity, our study has shown that depression case~~ finding questions were not

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28 implemented consistently within consultations and practice routines.

30 Our findings also help explain the lack of benefit of case finding when it is implemented

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32 outside of collaborative care models [14]. We identified mixed attitudes towards case

34 ~~finding amongst both professionals and patients, coupled with the absence of agreed~~

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36 pathways for patient follow-up and management. Collaborative care, with explicit monitoring

37 and structured management of both physical and mental health problems could help

39 alleviate some of the barriers identified in this study.

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41 Study limitations mainly related to the nature of our observations, and sampled practices.

43 We were aware of the intrusive nature of observation and the likelihood that people behaved

45 differently when under observation. For example, professionals may have made more of an

47 effort to ask the PHQ2 questions sensitively, or ask them at all. When possible, observation

49 began following a period of familiarisation to allow the healthcare professional to grow used

51 to the researcher's presence. A week may also be insufficient to fully understand all practice

53 processes and relationships; however, similar approaches have produced substantial

54 insights into healthcare organisational behaviour elsewhere ~~[37]~~[41]. Even allowing for

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7 these limitations, it is striking how often professionals did deviate from recommended
8 practice. Professionals and patients are often used to the presence of a third party during
9 consultations for training purposes, although some of the nurses observed did comment on
10 feeling under pressure to demonstrate that they were following procedures correctly.

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14 The generalizability of our findings may be limited given that this study took place within one
15 geographical area. However, Leeds is typical of UK cities in terms of social deprivation
16 indices, demographics, characteristics of primary care services and distribution of common
17 diseases such as CHD and diabetes [38]. ~~Furthermore, we sampled a relatively diverse~~
18 ~~range of practices.[42]. Furthermore, we sampled a relatively diverse range of practices~~
19 ~~and found that practice characteristics, such as deprivation and QOF achievement, affected~~
20 ~~how case-finding was approached.~~ Opportunistic case findings were under-represented in
21 our sample of 63 consultations but we did not find any systematic differences from chronic
22 disease review case findings in our analysis.

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26 We identified a range of problems with incentivised screening for depression. Our
27 accompanying interrupted time series analysis indicates that incentivised case-finding did
28 change clinical behaviour, increasing new depression-related diagnoses and, compared with
29 untargeted patients with chronic illness, perpetuated increasing rates of antidepressant
30 prescribing [26][29]. It is difficult to predict with any confidence whether greater changes
31 would have occurred if case-finding had been applied with greater fidelity. However, our
32 findings have broader implications for efforts to improve detection of depression in people
33 with chronic illness.

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37 Specifically, all of patients, professionals and healthcare systems need to be prepared in
38 advance of case-finding. Firstly, for patients, experience with the diagnostic disclosure of
39 illnesses such as dementia and cancer suggests that acceptance is facilitated by a series of
40 negotiated steps rather than a 'one-off' process [39-40][43 44]. For example, patients in our
41 study indicated they would have been more receptive to case-finding had they received
42 information beforehand about the higher prevalence of depression in chronic physical illness.

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7 It is also possible that the act of case-finding does form an initial step in helping patients
8 consider and come to terms with a diagnosis of depression, given that we found screen
9 negative patients subsequently consulted with mood problems. Secondly, professional
10 attitudes towards and skills required in the detection of depression need to be examined.
11 Some voiced unease about whether they were incorporating the questions correctly within
12 consultations or uncertainty about how to handle potential new diagnoses, particularly
13 nursing staff. Thirdly, resources and care pathways need to be optimised to accommodate
14 detection and follow up. ~~Those who screen positive~~Patients identified through case-
15 ~~finding~~ are more likely to have mild-moderate rather than severe depression and less likely
16 to benefit from antidepressant treatment [41-42][45-46]. Resources are needed to manage
17 those identified through case-finding recommended by clinical guidelines. Health
18 professionals were understandably reluctant to open up a “can of worms” during tightly
19 restricted chronic illness reviews; the exploration of sensitive issues requires greater
20 flexibility in consultation time. We also found instances where screen-positives were not
21 acted upon given the absence of explicitly agreed pathways within practices.

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34 There are more general lessons beyond depression detection. Mood disorders are not the
35 only sensitive issue raised during chronic illness reviews. Our findings should prompt a
36 reappraisal of how such reviews are designed and implemented for other emotionally-laden
37 problems integral to chronic illness care, such as weight management, sexual dysfunction
38 and alcohol misuse [43]. ~~Health professionals may welcome structured protocols to~~
39 ~~help ensure coverage of key issues; there is evidence that prompting interventions~~
40 ~~have a small to modest effect on practice and patient outcomes [44]. However, such~~
41 ~~approaches have been less successful in addressing relatively complex clinical~~
42 ~~behaviours, especially for chronic illness management [45]. The subsequent~~
43 ~~challenge for quality improvement programmes and research is to further explore~~
44 ~~and evaluate how to develop interventions which can be embedded within primary~~

care systems and consultations to improve population outcomes whilst preserving patient-centred care.[47]. Health professionals may welcome structured protocols to help ensure coverage of key issues; there is evidence that prompting interventions have a small to modest effect on practice and patient outcomes [48]. However, such approaches have been less successful in addressing relatively complex clinical behaviours, especially for chronic illness management [49]. The subsequent challenge for quality improvement programmes and research is to further explore and evaluate how to develop interventions which can be embedded within primary care systems and consultations to improve population outcomes whilst preserving patient-centred care. The National Institute for Health and Care Excellence guidance on implementation recommends direct observation of practice as one way to identify potential barriers to changing practice [50] and although we have demonstrated the value of direct observation in evaluating new policy initiatives compared to (say) interview studies alone, it is not routinely undertaken when introducing new QOF indicators[11].

Incentivised case-finding exacerbated tensions between perceived patient-centredness and the time-limited routine of the consultation. Both professionals and patients reacted to the imposition of case-finding by adapting, or even subverting, the process recommended by national guidance. Despite their apparent simplicity, the case-finding questions are not consultation-friendly, and acceptable alternative ways to raise mood disorders merit further exploration. Practice, as well as guidance on how to introduce the questions so patients don't feel depression is something that happens to 'other people' as our patient's awareness theme suggests. If case-finding is to be recommended for other patient groups, practice teams need clearer guidance on the pathway for people with likely depression which can be accommodated within available systems and resources.

What is already known on this topic

- Case-finding for depression was incentivised in UK primary care to increase

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depression diagnosis and management.

- Evidence that case-finding has improved depression outcomes is lacking and health care professionals have expressed dissatisfaction with its implementation.

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What this study adds

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- Patients and health care professionals subverted the standardised process of depression case-finding to suit their consultation style and needs.

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- Practices need clear guidance on how to include mental health discussions within consultations and pathways for those identified as through case finding. Case-finding needs to be aligned with structured care processes and how healthcare professionals and patients think about mood problems in chronic physical disease.

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Ethics Approval

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This study was approved by the South West - Exeter Research Ethics Committee (reference 11/SW/0335). The participants gave informed consent before taking part.

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Funding

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Transparency Declaration

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6 Dr Sarah L Alderson, the lead author (the manuscript's guarantor), affirms that the
7
8 manuscript is an honest, accurate, and transparent account of the study being reported; that
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10 no important aspects of the study have been omitted; and that any discrepancies from the
11
12 study as planned have been explained.

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13 14 **Data sharing statement**

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16 Data sharing: no additional data available.

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17 18 **Contributorship Statement**

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20 RF and AH conceived the project. RF was principal investigator. SA and KM designed the
21
22 study. SA and AR were responsible for running the project. AR was responsible for data
23
24 collection. All authors interpreted the data and findings. SA wrote the first draft of the
25
26 manuscript. RF commented on the first draft and all authors commented on further revisions.
27
28 SA is guarantor of the paper.

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29 30 **Competing interests**

31
32 All authors received funding from National Institute of Health Research to undertake this
33
34 study.

35 36 **References**

- 37
38
39 1. Goldney RD, Phillips PJ, Fisher LJ, [Wilson-DH et al.](#) Diabetes, Depression, and Quality of Life.
40 Diabetes Care 2004;**27**(5):1066-70 doi: 10.2337/diacare.27.5.1066[published Online First:
41 Epub Date]].
- 42 2. Rudisch B, Nemeroff CB. Epidemiology of comorbid coronary artery disease and depression.
43 Biological Psychiatry 2003;**54**(3):227-40
- 44 3. Carney RM, Freedland KE, Miller GE, [Jaffe-AS et al.](#) Depression as a risk factor for cardiac mortality
45 and morbidity: A review of potential mechanisms. Journal of Psychosomatic Research
46 2002;**53**(4):897-902
- 47 4. Anderson RJ, Freedland KE, Clouse RE, [Lustman-PJ et al.](#) The Prevalence of Comorbid Depression
48 in Adults With Diabetes: A meta-analysis. Diabetes Care 2001;**24**(6):1069-78 doi:
49 10.2337/diacare.24.6.1069[published Online First: Epub Date]].
- 50 5. Simon GE, VonKorff M. Recognition, management, and outcomes of depression in primary care.
51 1995(2):99-105

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51
52
53
54
55
56
57
58
59
60
6. Barth J, Schumacher M, Herrmann-Lingen C. Depression as a Risk Factor for Mortality in Patients With Coronary Heart Disease: A Meta-analysis. *Psychosom. Med.* 2004;**66**(6):802-13 doi: 10.1097/01.psy.0000146332.53619.b2[published Online First: Epub Date]].
 7. Katon W, Ciechanowski P. Impact of major depression on chronic medical illness. *Journal of Psychosomatic Research* 2002;**53**(4):859-63
 8. National Institute of Clinical Excellence. Depression in adults with a chronic physical health problem: treatment and management. NICE. : NICE, 2009.
 9. New Zealand Guidelines Group. Identification of Common Mental Disorders and Management of Depression in Primary Care. An Evidence-based Best Practice Guideline. Wellington, 2008.
 10. US Preventative Services Task Force. Screening for Depression in Adults: U.S. Preventive Services Task Force Recommendation Statement. *Annals of Internal Medicine* 2009;**151**(11):784-92 doi: 10.1059/0003-4819-151-11-200912010-00006[published Online First: Epub Date]].
 11. University of Birmingham and University of York Health Economics Consortium. NM49 indicator development feedback report 2012.
 12. BMJ Best Practice. Screening: Patient Health Questionnaire-2 (PHQ-2). BMJ Best Practice 2010. <http://bestpractice.bmj.com/best-practice/monograph/55/prevention.html>.
 13. Health and Social Care Information Centre. Quality Outcomes Framework 2012/13 results. Secondary Quality Outcomes Framework 2012/13 results 2013. <http://qof.hscic.gov.uk/index.asp>.
 14. Gilbody S, Sheldon T, House A. Screening and case-finding instruments for depression: a meta-analysis. *Canadian Medical Association Journal* 2008;**178**(8):997-1003 doi: 10.1503/cmaj.070281[published Online First: Epub Date]].
 15. Dowrick C, Buchan I. Twelve month outcome of depression in general practice: does detection or disclosure make a difference? *BMJ* 1995;**311**(7015):1274-76
 16. Gilbody SM, House A, Sheldon T. Screening and case finding instruments for depression [Systematic Review]. *Cochrane Database of Systematic Reviews* 2009;**3**:3
 17. Pignone MP, Gaynes BN, Rushton JL, et al. Screening for Depression in Adults: A Summary of the Evidence for the U.S. Preventive Services Task Force. *Annals of Internal Medicine* 2002;**136**(10):765-76 doi: 10.7326/0003-4819-136-10-200205210-00013[published Online First: Epub Date]].
 18. ~~Serumaga B, Ross-Degnan D, Avery A, et al. Effect of pay for performance on the management and outcomes of hypertension in the United Kingdom: interrupted time series study. *BMJ* 2011;**342**:d108-Gilbody S, Sheldon T, Wessely S. Should we screen for depression? *BMJ* 2006;**332**(7548):1027-30 doi: 10.1136/bmj.332.7548.1027[published Online First: Epub Date]].~~
 19. National Screening Committee. Programme Appraisal Criteria. Secondary Programme Appraisal Criteria 2013. www.screening.nhs.uk/criteria.
 20. ~~Serumaga B, Ross-Degnan D, Avery A, et al. Effect of pay for performance on the management and outcomes of hypertension in the United Kingdom: interrupted time series study. *BMJ* 2011;**342**:d108~~
 21. Campbell SM, Reeves D, Kontopantelis E, ~~Sibbald B, Roland Met al.~~ Effects of Pay for Performance on the Quality of Primary Care in England. *N Engl J Med* 2009;**361**:368-78
 22. Scott A, Sivey P, Ait Ouakrim D, et al. The effect of financial incentives on the quality of health care provided by primary care physicians. *Cochrane Database Syst Rev* 2011(9):CD008451

- 1
2
3
4
5
6
7 [2123](#). Checkland K, Harrison S, McDonald R, ~~Grant S, Campbell SM, Guthrie B~~ et al. Biomedicine, holism and general medical practice: responses to the 2004 General Practitioner contract. *Sociology of Health and Illness* 2008;**30**:788-803
- 8
9
10 [2224](#). McDonald R, Harrison S, Checkland K, ~~Campbell S, Roland Met~~ et al. Impact of financial incentives on clinical autonomy and internal motivation in primary care: ethnographic study. *BMJ* 2007;**334**(7608):1333-34
- 11
12
13 [2325](#). Maisey S, Steel N, Marsh R, ~~Gillam S, Fleetcroft R, Howe A~~ et al. Effects of payment for performance in primary care: qualitative interview study. *Journal of Health Services Research & Policy* 2008;**13**(3):133-39 doi: 10.1258/jhsrp.2008.007118[published Online First: Epub Date] |.
- 14
15
16
17
18 [2426](#). Mitchell C, Dwyer R, Hagan T, ~~Mathers Net~~ et al. Impact of the QOF and the NICE guideline in the diagnosis and management of depression: a qualitative study. *Br. J. Gen. Pract.* 2011;**61**(586):e279-e89 doi: 10.3399/bjgp11X572472[published Online First: Epub Date] |.
- 19
20
21
22 [2527](#). Coventry PA, Hays R, Dickens C, et al. Talking about depression: a qualitative study of barriers to managing depression in people with long term conditions in primary care. *BMC Fam Pract* 2011;**12**:10 doi: 10.1186/1471-2296-12-10[published Online First: Epub Date] |.
- 23
24
25 [2628](#). Dowrick C, Leydon GM, McBride A, et al. Patients' and doctors' views on depression severity questionnaires incentivised in UK quality and outcomes framework: qualitative study. Br. Med. J. 2009;338:6 doi: b663
- 26
27 [10.1136/bmj.b663\[published Online First: Epub Date\] |.](#)
- 28
29 [29](#). McLintock K, Russell A, West R, et al. Effect of financial incentives on screening for depression in patients with chronic disease in the United Kingdom: an interrupted time series study. Manuscript in preparation 2013
- 30
31
32 [2730](#). Practitioners RCoG. Supporting Carers: An action guide for general practitioners and their teams.: Royal College of General Practitioners, 2011.
- 33
34
35 [2831](#). Burden AD, Boon MH, Leman J, ~~Wilson H, Richmond R, Ormerod A~~ et al. Diagnosis and management of psoriasis and psoriatic arthritis in adults: summary of SIGN guidance. *BMJ* 2010;**341** doi: 10.1136/bmj.c5623[published Online First: Epub Date] |.
- 36
37
38 [2932](#). Collier F, Smith RC, Morton CA. Diagnosis and management of hidradenitis suppurativa. *BMJ* 2013;**346** doi: 10.1136/bmj.f2121[published Online First: Epub Date] |.
- 39
40
41 [3033](#). Emerson RM, Fretz RI, Shaw LL. *Writing ethnographic fieldnotes*. 2nd ed: University of Chicago Press, 2011.
- 42
43 ~~[3134](#). Anekwe L. QOF depression indicators face axe. *Pulse* 2011(June 2011)~~
- 44
45 [35](#). Chew-Graham CA, Hunter C, Langer S, et al. How QOF is shaping primary care review consultations: a longitudinal qualitative study. *BMC Fam Pract* 2013;**14**(1):103
- 46
47 ~~[3236](#). Campbell SM, McDonald R, Lester H. The experience of pay for performance in English family practice: a qualitative study. *Annals of Family Medicine* 2008;**6**(3):228-34~~
- 48
49 [3337](#). Hannon KL, Lester HE, Campbell SM. Patients' views of pay for performance in primary care: a qualitative study. *Br. J. Gen. Pract.*; **62**(598):e322-e28 doi: 10.3399/bjgp12X641438[published Online First: Epub Date] |.
- 50
51
52 [3438](#). Lester H, Matharu T, Mohammed MA, ~~Lester D, Foskett-Tharby Ret~~ et al. Implementation of pay for performance in primary care: a qualitative study 8 years after introduction. *Br. J. Gen.*
- 53
54
55
56
57
58
59
60

- Pract. 2013;**63**(611):e408-e15 doi: 10.3399/bjgp13X668203[published Online First: Epub Date]].
- 3539.** Rousseau N, McColl E, Newton J, ~~Grimshaw J, Eccles Met al.~~ Practice based, longitudinal, qualitative interview study of computerised evidence based guidelines in primary care. *BMJ* 2003;**326**(7384):314 doi: 10.1136/bmj.326.7384.314[published Online First: Epub Date]].
- 3640.** Craig P, Dieppe P, Macintyre S, ~~Michie S, Nazareth I, Petticrew Met al.~~ Developing and evaluating complex interventions: the new Medical Research Council guidance. *BMJ* 2008;**337** doi: 10.1136/bmj.a1655[published Online First: Epub Date]].
- 3741.** Dixon-Woods M, Leslie M, Bion J, ~~Farrant-Cet al.~~ What Counts? An Ethnographic Study of Infection Data Reported to a Patient Safety Program. *Milbank Quarterly* 2012;**90**(3):548-91 doi: 10.1111/j.1468-0009.2012.00674.x[published Online First: Epub Date]].
- 3842.** Public Health England. National General Practice Profiles - Leeds PCT. Secondary National General Practice Profiles - Leeds PCT 2013.
<http://www.apho.org.uk/PracProf/Profile.aspx#mod,2,pyr,2012,pat,2,par,E16000074,are,-,sid1,2000002,ind1,243-4,sid2,2000005,ind2,->
- 3943.** Fallowfield L, Jenkins V. Effective communication skills are the key to good cancer care. *European journal of cancer (Oxford, England : 1990)* 1999;**35**(11):1592-7
- 4044.** Lecouturier J, Bamford C, Hughes J, et al. Appropriate disclosure of a diagnosis of dementia: identifying the key behaviours of 'best practice'. *BMC Health Services Research* 2008;**8**(1):1-10 doi: 10.1186/1472-6963-8-95[published Online First: Epub Date]].
- 4145.** Coyne JC, Schwenk TL, Fechner-Bates S. Nondetection of depression by primary care physicians reconsidered. *General Hospital Psychiatry* 1995;**17**(1):3-12 doi: [http://dx.doi.org/10.1016/0163-8343\(94\)00056-J](http://dx.doi.org/10.1016/0163-8343(94)00056-J)[published Online First: Epub Date]].
- 4246.** Arroll B, Goodyear-Smith F, Crengle S, et al. Validation of PHQ-2 and PHQ-9 to screen for major depression in the primary care population. *Ann Fam Med* 2010;**8**(4):348-53 doi: 10.1370/afm.1139[published Online First: Epub Date]].
- 4347.** Crosson JC, Heisler M, Subramanian U, et al. Physicians' Perceptions of Barriers to Cardiovascular Disease Risk Factor Control among Patients with Diabetes: Results from the Translating Research into Action for Diabetes (TRIAD) Study. *The Journal of the American Board of Family Medicine* 2010;**23**(2):171-78 doi: 10.3122/jabfm.2010.02.090125[published Online First: Epub Date]].
- 4448.** Shojania Kaveh G, Jennings A, Mayhew A, ~~Ramsay Craig R, Eccles Martin P, Grimshaw Jet al.~~ The effects of on-screen, point of care computer reminders on processes and outcomes of care. *Cochrane Database of Systematic Reviews* 2009; (3).
<http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD001096.pub2/abstract>.
- 4549.** Grimshaw JM, Eccles MP, Lavis JN, ~~Hill SJ, Squires JE, et al.~~ Knowledge translation of research findings. *Implementation Science* 2012;**7**(50):1-29
- 50.** [National Institute for Health and Care Excellence. Into practice guide: Using NICE guidance and quality standards to improve practice, 2013.](#)

Table 1 – Observed practice characteristics

Surgery	QOF score*	List Size*	Deprivation Score*	Patients Recruited
Practice A	Low	Low	Low	3
Practice B	Low	High	High	13
Practice C	Low	High	Low	5
Practice D	High	High	Low	6
Practice E	High	High	High	6
Practice F	High	Low	High	5
Practice G	Low	High	Low	5
Practice H	Low	Low	Low	5
Practice I	High	High	Low	4
Practice J	Low	Low	High	5
Practice K	Low	Low	High	4
Practice L	High	Low	Low	2

* Compared to Primary Care Trust median

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Table 2 - Patient demographics in observed consultations

	No. of patients	% of patients
Gender		
Female	21	33%
Male	42	67%
Age group		
18-30	7	11%
31-50	5	8%
51-64	18	29%
65-79	28	44%
80+	5	8%
Chronic Illness		
CHD	13	21%
DM	46	73%
CHD & DM	4	6%
Ethnicity		
White British	49	78%
Mixed British	1	2%
White Irish	2	3%
Chinese	1	2%
Black Caribbean	5	8%
Pakistani	3	5%
British Asian	1	2%
Indian	1	2%
Previous diagnosis of depression		
Yes	9	14%
No	54	86%

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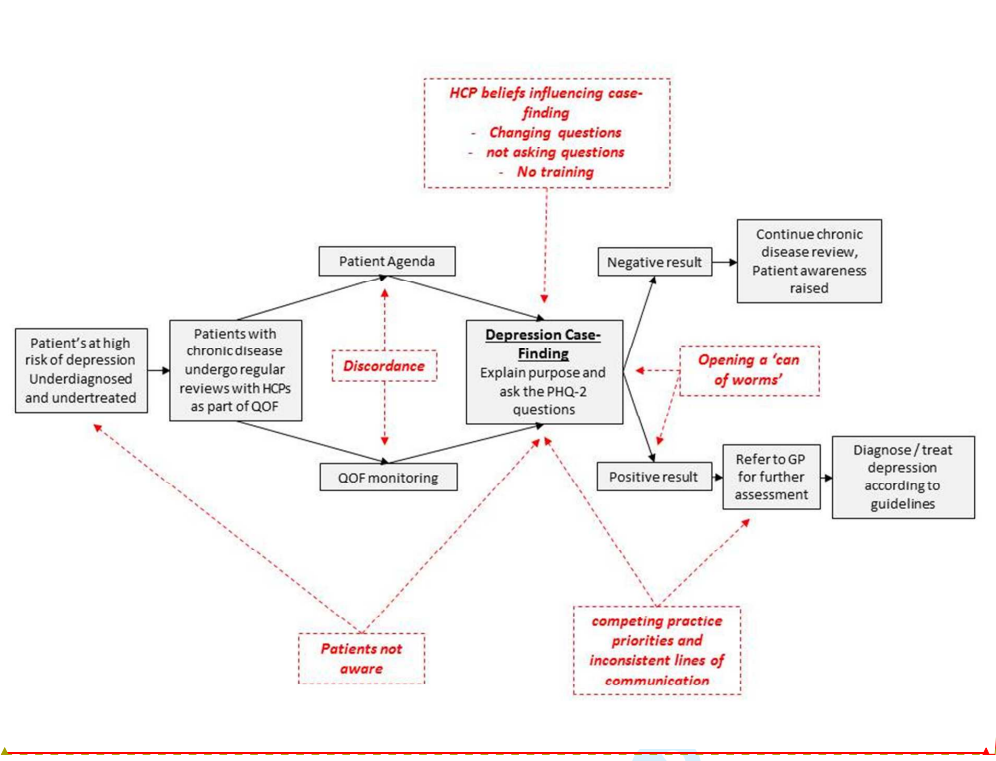
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Figure 1. Flow chart of idealised depression case-finding process and barriers identified.

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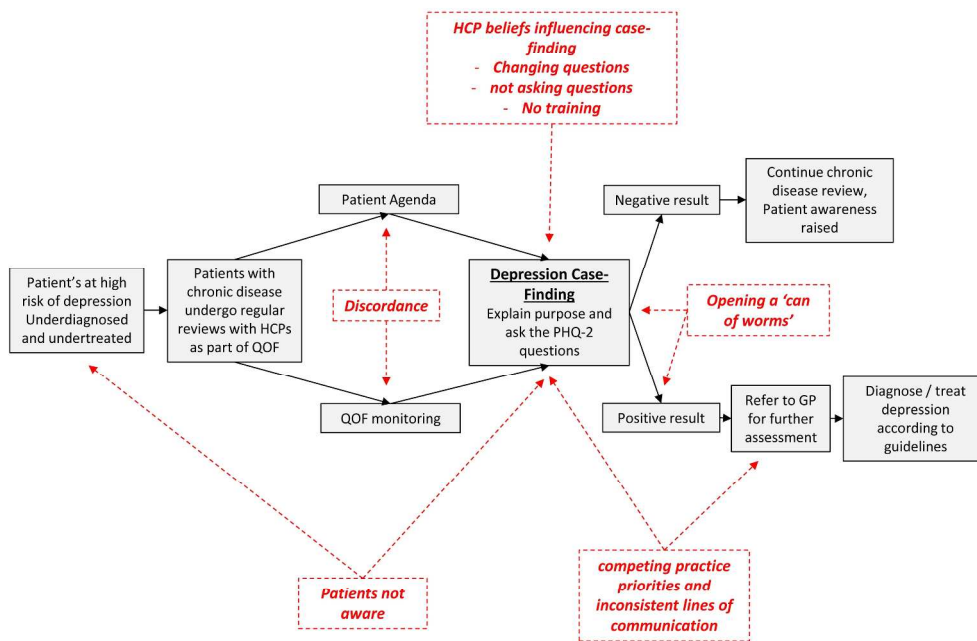


Figure 1. Flow chart of idealised depression case-finding process and barriers identified. 254x190mm (300 x 300 DPI)

BMJ Open

Incentivised case finding for depression in patients with chronic heart disease and diabetes in primary care: an ethnographic study

Journal:	<i>BMJ Open</i>
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Secondary Subject Heading:	Patient-centred medicine, Mental health, Health policy, Cardiovascular medicine, Diabetes and endocrinology
Keywords:	PRIMARY CARE, Coronary heart disease < CARDIOLOGY, General diabetes < DIABETES & ENDOCRINOLOGY, MENTAL HEALTH, Depression & mood disorders < PSYCHIATRY, QUALITATIVE RESEARCH

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3 **Incentivised case finding for depression in patients with chronic heart disease and**
4 **diabetes in primary care: an ethnographic study**
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Abstract

Objective

To examine the process of case-finding for depression in people with diabetes and coronary heart disease within the context of a pay-for-performance scheme.

Design

Ethnographic study drawing upon observations of practice routines and consultations, debriefing interviews with staff and patients, and review of patient records.

Setting

General practices in Leeds, United Kingdom.

Participants

Twelve purposively sampled practices with a total of 119 staff; 63 consultation observations; and 57 patient interviews.

Main outcome measure

Audio-recorded consultations and interviews with patients and health care professionals along with observation field notes were thematically analysed. We assessed outcomes of case-finding from patient records.

Results

Case-finding exacerbated the discordance between patient and professional agendas, the latter already dominated by the tightly structured and time-limited nature of chronic illness reviews. Professional beliefs and abilities affected how case-finding was undertaken; there was uncertainty about how to ask the questions, particularly amongst nursing staff.

Professionals were often wary of opening an emotional “can of worms.” Subsequently, patient responses potentially suggesting emotional problems could be prematurely shut down by professionals. Patients did not understand why they were asked questions about depression. This sometimes led to defensive or even defiant answers to case-finding.

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3 Follow up of patients highlighted inconsistent systems and lines of communication for
4
5 dealing with positive results on case-finding .
6

7 *Conclusions*

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10 Case-finding does not fit naturally within consultations; both professional and patient
11
12 reactions somewhat subverted the process recommended by national guidance. Quality
13
14 improvement strategies will need to take account of our results in two ways. First, despite
15
16 their apparent simplicity, the case-finding questions are not consultation-friendly, and
17
18 acceptable alternative ways to raise the issue of depression need to be supported. Second,
19
20 case-finding needs to operate within structured pathways which can be accommodated
21
22 within available systems and resources.
23

24 **Strengths and limitations of this study**

25 **Strengths**

- 26 • Multi-site ethnography of broadly representative general practices
- 27 • Triangulation through use of multiple sources of data

28 **Limitations**

- 29 • Potential for clinician and patient behaviour to alter as a response to being observed
- 30 • Short periods of observation in each practice limiting range of types of behaviour
31
32 observed
- 33 • Observations within one geographical area, thereby potentially limiting
34
35 generalisability

Introduction

The detection and management of depression associated with chronic physical illness represents a major challenge for primary care. Depression is twice as common in those with chronic physical illness such as coronary heart disease (CHD) and diabetes compared to those without chronic physical illness [1-4]. Such co-morbidity can make depression hard to recognize, especially as symptoms of depression (such as fatigue) overlap with those of chronic physical illnesses [5]. Co-morbidity is also associated with poorer outcomes, including mortality [3 6 7]. One response is case-finding, defined as selective screening for depression in populations at high risk, such as those with chronic illness. This has been recommended by national guidance in the UK [8] and elsewhere. [9 10]. The Quality and Outcomes Framework (QOF), a pay-for-performance scheme in UK primary care, rewarded depression case-finding using two standard screening questions from the Patient Health Questionnaire-2 (PHQ-2) in all patients with CHD or diabetes [11]. The PHQ-2 asks, 'In the past two weeks, have you been bothered by: little interest or pleasure in doing things; and feeling down, depressed or hopeless?' [12] Routine data suggested high levels of case-finding, with a national average of 86% of eligible patients screened in 2011-12 [13].

However, there are problems with both the rationale underpinning this recommendation and the means undertaken to promote its implementation in the UK.

Firstly, there is no evidence that case-finding for depression by itself improves patient outcomes [14]. For case-finding to be effective it is important that potential cases are further assessed, diagnosed and offered appropriate clinical management within a structured clinical pathway [15-17]. There was no closely allied incentive in the QOF programme for subsequent patient care. Case-finding should also be considered against other recommended criteria for screening tests, such as acceptability and having an agreed policy about whom to treat as patients [18 19].

Secondly, evidence on the effects of financial incentives on primary care practice is, at best, mixed [20-22]. There are concerns that such incentives undermine professionals' intrinsic

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3 motivation, patient-centeredness, and continuity of care and have led to a 'tick box' culture
4 as health professionals work through checklists for chronic illness management [21 23-25].
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6 Health professionals themselves have expressed dissatisfaction with incentivised depression
7
8 management, particularly the use of incentivised depression severity measurements,
9
10 although patients value their use within consultations. [26-28].
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12

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14 Our accompanying interrupted time series analysis found that incentivised case finding
15
16 increased new depression-related diagnoses in people with diabetes and CHD and
17
18 perpetuated rising trends in new prescriptions of antidepressants [29]. Even though this
19
20 incentivised case finding ceased in 2013 due to lack of evidence of patient benefit, there are
21
22 continuing calls for 'something to be done' to detect and treat depression in high risk groups
23
24 [30-32]. However, the professional and patient experiences of incentivised case-finding,
25
26 how it affected clinical care, and its fit with the routines of practice life are poorly understood.
27
28 We investigated the process of incentivised case-finding during scheduled and opportunistic
29
30 reviews of patients with diabetes and CHD.
31
32

33 34 **Methods**

35 36 37 *Design and setting*

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39 Our ethnographic design combined direct observation with interviews and review of patient
40
41 records. We wanted to build an in-depth understanding of how patient case-finding was
42
43 conducted within the context of everyday practice life and routine patient care. The study
44
45 took place in general practices in Leeds, UK.
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47

48 49 *Participants*

50
51 We invited all practices in Leeds to participate. We then sought a purposive sample of
52
53 practices using a four-by-two sampling frame based upon whether practice QOF
54
55 achievement was above or below the Leeds median, further stratified by list size and
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3 deprivation profiles. Practices that consented to participate were booked for a week of
4 observation, during which we aimed to observe at least three consultations.
5
6

7 Practices sent letters of invitation and information packs to patients scheduled for chronic
8 disease reviews within the observation week. We also approached patients attending for
9 routine consultations to enable observation of opportunistic case-finding. Practice staff
10 identified patients due to be asked the case-finding questions and asked if they would be
11 interested in participating when they arrived at reception for their appointment. All patients
12 and professionals subsequently observed gave informed consent.
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19 *Data collection and analysis*

20 An ethnographer (AR) used a funnelling approach to observe and describe the context of
21 and behaviours within the practice [33], moving to detailed observation and audio-recording
22 of consultations. Observation considered both verbal and non-verbal features including: how
23 case-finding questions are framed and asked; events leading up to questioning; patient
24 verbal and non-verbal reactions and responses; and overall style of the consultation. This
25 style of observation allowed the researcher to layer the analysis of the consultations with
26 contextual information providing a richer interpretation of the observation data. She held
27 semi-structured debriefing interviews with patients who had been observed. The interviews
28 aimed to explore patient views on the process and experience of the consultation in further
29 depth. Unstructured interviews took place with the health care professionals involved in
30 depression case-finding and notes taken on all discussions regarding depression case-
31 finding. We reviewed patients' medical records six weeks after observation to check for any
32 subsequent clinical events related to depression identification and management. Events
33 included appointments where mood was discussed, telephone consultations, depression
34 severity assessments, referrals to mental health teams or talking therapies and new
35 prescriptions for depression medication.
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3 The perceived relative importance and organisation of QOF-related case-finding may vary
4 throughout the year. To partly ameliorate this we observed two practices towards the end of
5 the financial year when practices are typically working hardest to achieve QOF targets.
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8
9 Transcribed data (interviews, observation transcripts and observation notes) were managed
10 using NVivo9 and coded for themes. Thematic analysis was undertaken by two researchers,
11 independently coding for the themes and then comparing codes and themes. The analysis
12 was further refined by using constant comparison of themes, and looking for negative cases
13 in order to examine for similarities and differences within and between the patients'
14 perception and observations in different centres. Finally, to improve reliability and validity of
15 data, we triangulated findings from all three data sources.
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23 24 25 *Ethical review*

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27 The study was approved by National Research Ethics Service Committee South West –
28 Exeter (11/SW/0335).
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33 34 **Results**

35
36 Twelve practices participated and a total of 63 patient consultations were observed (range 2-
37 13 per practice; Table 1). Practice characteristics were relatively balanced, with five having
38 QOF achievement above the median for Leeds, five above median population deprivation
39 scores, and six above median list size. Patients were most commonly male, age 51-79
40 years, and white British (Table 2). Most (73%) participants had diabetes and nine (14%) had
41 a previous diagnosis of depression. Nine of the observed case findings took place
42 'opportunistically' within routine GP appointments. The rest occurred within dedicated
43 chronic disease clinics, usually with nurses.
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53 Based upon available guidance, observations and interviews, we constructed a basic
54 normative model of the process by which case-finding was expected to improve depression
55 detection and treatment (Figure 1). We then identified a number of ways in which
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3 professional and patient behaviours and beliefs and the working patterns of general
4 practices subverted or affected the operation of this model. We found five barriers:
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6 discordance between patient and professional agendas; professional uncertainty around
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8 how to undertake the case-finding itself; reluctance to open a “can of worms”; patients being
9
10 unaware of depression risk or case-finding taking place; and competing practice priorities
11
12 and inconsistent lines of communication around the management of potential cases of
13
14 depression.
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16 17 18 *Discordance between patient and professional agendas*

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20 Case-finding often occurred within tightly structured and time-limited chronic illness reviews
21
22 required to document QOF processes of care, and appeared to exacerbate existing
23
24 discordance. This led to professionals disregarding attempts by patients to steer the
25
26 consultation around to their own perceived needs. Patients were often not focused on and
27
28 often did not understand the purpose of the review process and used the consultation as an
29
30 opportunity to raise other problems. To manage this, professionals often interrupted patients
31
32 or returned the consultation to its purpose, discounting clues that the patient had worries
33
34 related to the chronic disease being reviewed or other illnesses.
35

36
37 Patient: [talking about hypoglycaemic attacks which were a subject of significant
38
39 anxiety for this patient (revealed in interview after appointment)] *Only time that I went*
40
41 *funny, I had a tooth out and I'd had, I couldn't have any breakfast, or I didn't have any*
42
43 *breakfast, because I don't like to be poorly when I've had teeth out, because I used*
44
45 *to be when I was younger, am I talking and disturbing....*
46

47
48 [Fieldnote] Nurse is trying to measure blood pressure; patient looks agitated.
49

50 Nurse: *Yes, I think you just probably need to just be quiet for a couple of minutes*
51
52 *while I check it, because it's even higher now! We want it to go down! Just try and*
53
54 *relax. OK. Observation 29*
55

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3 At this stage in the consultation the patient became distressed, apparently wishing to discuss
4 further their worries about hypoglycaemia. The professional subsequently moved the
5 conversation on to another QOF target and no follow up of concerns about hypoglycaemia
6 was arranged. The patient later told the researcher she was extremely worried about hypos
7 and was experiencing consistently low mood and high anxiety. The context of chronic illness
8 reviews was restrictive – in this case an opportunity for direct, subject specific case-finding
9 was missed because of the necessity to ask about and record other items. This represents
10 a missed opportunity for case-finding at a point in the review when the patient might have
11 been receptive to exploring associated mood problems.
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22 Difficulties arose in the consultation when the patient mentioned a problem that the health
23 professional perceived to be important but unrelated to the disease under review.

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26 Sometimes the review had to be abandoned as the patient's agenda became too important
27 to be ignored, or the patient too distressed to continue concentrating on the review. This
28 more patient-centred approach appeared to occur more often in practices that had lower
29 than average QOF achievement, suggesting that such practices traded off potential income
30 against responsiveness to patients.
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36 *Professional uncertainty around how to undertake the case-finding itself*

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39 Professional beliefs and abilities affected how case-finding was undertaken. In conversation
40 professionals expressed uncertainty about how best to phrase and ask the questions,
41 particularly nursing staff who told the researcher they sometimes felt insufficiently trained on
42 how to manage patients with possible depression. When asked, they questioned whether
43 they were case-finding for QOF rather than patient benefit. We noticed that those who felt
44 that the case-finding was for the benefit of patients appeared to work in practices that were
45 in areas of low deprivation, where as those in areas of higher deprivation felt there was a
46 lack of time to ask the questions and deal with any responses that might indicate a problem
47 with mood. In the context of a time-restricted consultation they felt overburdened.
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3 Field notes Practice A: [The nurse] referred to QOF as coming from “*on high*” to tell her
4 to incorporate it [case-finding]. She felt depression screening was problematic as they
5 had received “*no training*” in mental health or in screening and they were very
6
7
8
9 “*stretched for time in the appointment.*”
10

11 Professionals avoided directly asking case-finding questions if they were familiar with
12 patients but still recorded case-finding; they expressed beliefs that they could identify mood
13 changes through existing knowledge of patients. They often adapted the questions to suit
14 their consultation style or perceived patient needs.
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19 Sometimes confusion arose when the questions were framed to ask whether the patient was
20 coping with their illness, rather than to assess mood disorders in general. The patient
21 answered that they were managing their condition well but did not talk about their mood.
22 This was because the professionals believed the case-finding was to detect depression
23 associated with chronic disease only, not depression of any cause.
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31 Nurse: *Then so do you feel ok about your diabetes, do you have any, do you worry*
32 *about it, does it bother you at all?* Observation 27
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36 The case-finding questions were usually asked in the middle of chronic disease reviews.
37 Generally the templates for such reviews were followed in order, with depression case-
38 finding often occurring after discussion of alcohol consumption and smoking status. Once
39 asked, the professional would move on to discuss diet and exercise. The case-finding
40 questions appeared out of place in the consultation that mainly involved measuring physical
41 factors rather than mood related problems. When asked about the case-finding, most
42 nurses felt it was difficult to switch from asking something that could be measured (such as
43 weight, units of alcohol consumed) to something more subjective.
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52 *Reluctance to open a “can of worms”*

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55 Professionals at nearly every practice mentioned the term “can of worms” to express unease
56 with case-finding for depression. This metaphor indicated professional perceptions of both
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3 patient discomfort with being asked about emotions and their own emotional labour in asking
4 the questions. “Can of worms” helped articulate the belief that case-finding for depression
5 was anticipated as a problematic part of the consultation and threatened to derail routines.
6
7 Professionals anticipated having to manage and close down answers before patients began
8 to give them; this often informed their immediate response to patients’ answers regardless of
9 what patients said.
10

11
12 Many felt that by identifying a problem, it was their duty to uncover further the scale of the
13 problem and to discuss this further with the patient, rather than requesting that the patient
14 should make an appointment to discuss this with the doctor or when there would be more
15 time to devote to this. It was hard to move the consultation onto the rest of the review. This
16 often led to the questions being asked in a manner that made it difficult for the patient to
17 answer ‘yes’, such as “you have no problems coping, do you?” pre-empting any difficulties
18 the questions may cause.
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30 “Then Nurse 1 said *“it’s a question that makes you sigh, makes your heart heavy,*
31 *because you’re there and you say “you’ve been down and depressed?”* and she said
32
33 “loads of them saying “yes” and she’s thinking ‘no, you’re not, you’re not, depressed,
34 depressed, you’re just a bit down, a bit fed up, aren’t we all!’ So then she has to say
35
36 “Oh, why do you think that?” and it starts this 10 minute conversation that she really
37 didn’t want to be having, because she’s had to do three blood pressure readings,
38 loads of blood tests, trouble getting a vein, had to check their feet, loads of faffing
39 around, she’s only got 20 minutes.” Field notes Practice F
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47 Patients seldom answered with a simple “yes” or “no” and brought up specific difficulties,
48 such as bereavement. Following an initial acknowledgement, professionals then tended to
49 move consultations on without discussing the effects of these life events on mood.
50
51 Therefore, professionals prematurely shut down patient responses suggesting emotional
52 problems to reduce the risk of extended consultations.
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56
57 Nurse: *Are you alright, you haven’t been having little interest in doing things, or?*
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3 Patient: *No, no.*

4 Nurse: *Are you fine, are you okay? That's okay.*

5
6
7 Patient: *It's been 10 years since I've lost [woman's name].*

8
9 Nurse: *Is it, what, is that your wife?*

10
11 Patient: *Yes.*

12
13 Nurse: *10 years? That's a long time, isn't it? Can I just check your tablets then, do*
14
15 *you take aspirin, [lists medication]...* Observation 23

16
17
18 Some health care professionals talked about the emotional labour involved in case-finding.
19
20 Discussing depression was seen as being emotionally difficult and required feeling strong in
21
22 themselves, in order to cope with the answer. The emotional burden was exacerbated by
23
24 the professional's perception that regardless of the outcome of case-finding, there wouldn't
25
26 be in any change for the better for the patient. They perceived they were expending a great
27
28 deal of emotional labour on something that did not improve patient care and this
29
30 compounded their feelings.

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32
33 “[The nurse] said she screened a woman with COPD who then cried and cried and
34
35 then refused help and said she would sort herself out. This woman refused support
36
37 and refused to quit smoking. Then she screened a man who was overweight and
38
39 she'd just told him how serious his weight was and he cried about his weight and
40
41 then she offered support with mood and weight loss and he said no. So she said
42
43 most often it opens a can of worms, is demanding and difficult and rarely does
44
45 anything come of it.” Field notes practice B

46 47 *Patients being unaware of depression risk or case-finding taking place*

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49
50 Many patients undergoing case-finding did not see themselves as the type of people who
51
52 would be prone to depression and did not understand why they were asked. They
53
54 appreciated the idea that people should experience case-finding for depression but
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56 distanced themselves from the identity of those people. This sometimes led to defensive or
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3 even defiant answers, or deflecting questions with humour in an apparent attempt to
4 illustrate how preposterous it was to suspect that they might be suffering from depression.
5
6 This contradictory position of wanting everyone else to experience case-finding, seeing the
7 purpose/necessity of asking the questions but, in contrast, not feeling they should be
8 questioned and thus derided the process or made light of it. This illustrates that the case-
9 finding process in itself does not impact on patient self-perception of who may suffer from
10 depression and thus does not enable them to answer the questions honestly and openly.
11 They were concerned that they were being seen as someone who could not cope. This
12 especially occurred when the patient felt they had needed to be defensive over their lifestyle
13 choices, such as diet, exercise, alcohol consumption, just before being asked case-finding
14 questions. The review was seen as a 'telling off' for not doing the right things which then
15 made it difficult to answer subjective questions about mood.
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27 Nurse: *So during the past month have you been bothered by feeling down or*
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depressed or hopeless at all?

Patient looks perplexed.

Patient: *I'm always...* (His voice cracks and pretends to cry and rub his eyes like a
child) *Am I heck!*

Fieldnote: Nurse shuffles in her seat and leans forward. She's smiling but not 100%
comfortable. Observation 24

Interviewed patients articulated the belief that the professionals would pick up mood
problems or not coping without the need for such questions. They felt being aware of
depression was important in a generalised context but it did not fit with who they were, and
so found it hard to understand in the context of a chronic disease review.

Patient: *I mean if you're, if you're down they don't have to ask, they know so they*
start talking about it. Interview 2

Several patients admitted difficulty with answering questions about mood within the chronic
disease review during the interviews. They did not feel it was the appropriate place to

1
2
3 discuss mood and that the chronic disease review took over the consultation. Some
4 mentioned that they would like to be asked at a separate appointment just to cover mood,
5
6 although also understood the difficulties in achieving this.
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8

9
10 *“Just the fact that it’s like a, a review appointment and that I’m under time pressure*
11 *so it’s not, I feel like if I am to be asked about like depression and something like that,*
12 *there has to be a separate one (I: right) or like something depression, or like mood,*
13 *sort of like mental illness or like anxiety or whatever, like related, an appointment*
14 *related specifically to that or like a clinic specifically related to that.” Interview 21*
15
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19
20 Patients were mostly unaware of the increased prevalence of depression in chronic illness,
21 although felt they understood why it might occur. They suggested that introducing the case-
22 finding questions following an explanation that depression was more common in chronic
23 illness might facilitate disclosure; this rarely happened in practice.
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30 *Researcher: So when the nurse asks you about your mood... just like I’m trying to*
31 *imagine your perspective, why do you think that she’s asking these questions*
32 *usually when you get asked?*
33
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35

36
37 *Patient: I don’t know really, I didn’t know whether it was because of my history [of*
38 *depression] or... I didn’t realise that people with heart problems and diabetes get*
39 *depressed. I suppose if you’re not well or you’ve got on going things with you, I*
40 *suppose it can depress you.” Interview 44*
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45 *Competing practice priorities*

46
47 Practices varied in how they prioritised and organised case-finding for depression. Some
48 practices devoted a lot of time and energy whilst others considered that some elements of
49 QOF, such as the depression indicators, required too much effort for too little gain.
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3 Field notes, Practice B: This leads to a debate over the decision between QOF
4 payments and the work put in to achieve those payments. GPs are saying they
5 should “*choose their battles.*”
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10 One practice did not concentrate on QOF at all and offered a different style of practice to
11 their patients, with patients being seen as and when they wanted and most staff being
12 unaware of the QOF domains and items needed, or where to find them on the computer
13 system. Despite this, the nursing staff still used the QOF template to conduct the chronic
14 disease reviews.
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19

20 “I ask how many patients haven’t been screened for depression in the last 15months.
21
22

23 No one knows how to find this out (including the Practice Manager and the IT guy).”
24
25

26 Field notes Practice J
27

28 Five out of 63 patients had positive results to case-finding; practices subsequently acted on
29 one of these. Two patients who had negative case-finding subsequently consulted to seek
30 help for mood problems. Our follow up highlighted inconsistent systems and lines of
31 communication within practices for dealing with positive result on case-finding . Although
32 GPs were aware that nursing staff undertook case finding, many did not know how a positive
33 case-finding would be communicated to them. Nurses assumed that GPs reviewed the case-
34 finding outcome when seeing patients following reviews but this was seldom the case. For
35 example, one patient who had a positive result was asked to return a PHQ9 which indicated
36 moderate depression symptoms. This was filed without notification to a GP and only picked
37 up on our clinical record review.
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48 Practices in areas with less deprivation seemed more likely to have a specified system for
49 following up positive case-finding results.
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52 “[The nurse] said if they answered they were depressed she’d do the PHQ9 with
53 them and make them an appointment to see the Dr but she felt the Dr wouldn’t do
54 anything for them and doing the PHQ9 makes her run late so she’s conflicted
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3 about how useful it is to screen if you feel no one cares about the result.” Field
4 notes Practice A
5

6
7 “[The doctor] said she didn’t really look at the mental health stuff. I said *“Is there like a*
8 *system in place or does a score of two trigger anything, or?”* and she said *“no, maybe*
9 *we need to look at that.”* But she left it there.” Field notes Practice F
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13 14 15 **Discussion**

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18 Case-finding for depression did not naturally fit within primary care consultations. It
19 appeared to cause discordance between professionals and patients. Professionals
20 struggled to align case-finding with a person-centred approach and were wary of the risk of
21 patients’ emotional issues derailing routine reviews. Professionals believed it was good to
22 ask about mental health but disliked the structure of the PHQ-2 and feeling forced to add it to
23 consultations. They subsequently responded by going ‘off script’ or discounting cues.
24 Patients sometimes did not understand why the case-finding questions were being asked, or
25 did not see themselves as the type of people prone to depression. This led to defensiveness
26 or even defiance in their responses, especially if not anticipated as part of their review.
27 Practice responses to case finding outcomes were haphazard, which may have reflected
28 professional ambivalence towards depression case-finding and the available treatment
29 options for those identified as having depression.
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43 Case-finding for depression exemplifies what happens when attempts are made to fit
44 apparently straightforward but deceptively complex interventions into primary care
45 consultations and systems. Previously, anecdotal evidence and interviews with GPs have
46 suggested that implementing case-finding was more difficult than intended [27 34 35]. This
47 study provides clear evidence to the barriers faced by professionals and patients in
48 implementing depression case-finding in practice, as well as observational data of what
49 actually happens in practice that both parties may not be aware of. Implementing
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3 depression case-finding is different to other QOF targets as the topic itself is subject to
4
5 significant stigma from both parties.
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8 This study provides the strongest evidence yet that the principle of interrupting the flow of
9
10 clinical conversation to ask out-of-context questions about sensitive issues has many
11
12 significant barriers in clinical consultations. Much has been written about how QOF checklist
13
14 approaches have disrupted consultation flows and led to the patient agenda being unheard
15
16 [36-39]. This is part of a wider phenomenon. For example, Rousseau *et al* demonstrated
17
18 how a set of computerised prompts conflicted with established consultation processes [40].
19
20 Adding the case-finding questions to these processes is inappropriate when the scripts and
21
22 protocols have already created discordance between agendas. Such experience highlights
23
24 the need for systematic development and evaluation of such interventions to ensure
25
26 acceptability and feasibility before wider roll-out [41]. Despite their apparent simplicity, our
27
28 study has shown that depression case-finding questions were not implemented consistently
29
30 within consultations and practice routines.
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32
33 Our findings also help explain the lack of benefit of case-finding when it is implemented
34
35 outside of collaborative care models [14]. We identified mixed attitudes towards case-finding
36
37 amongst both professionals and patients, coupled with the absence of agreed pathways for
38
39 patient follow-up and management. Collaborative care, with explicit monitoring and
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41 structured management of both physical and mental health problems could help alleviate
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43 some of the barriers identified in this study.
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45
46 Study limitations mainly related to the nature of our observations, and sampled practices.

47
48 We were aware of the intrusive nature of observation and the likelihood that people behaved
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50 differently when under observation. For example, professionals may have made more of an
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52 effort to ask the PHQ2 questions sensitively, or ask them at all. When possible, observation
53
54 began following a period of familiarisation to allow the healthcare professional to grow used
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56 to the researcher's presence. A week may also be insufficient to fully understand all practice
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58 processes and relationships; however, similar approaches have produced substantial
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3 insights into healthcare organisational behaviour elsewhere [42]. Even allowing for these
4 limitations, it is striking how often professionals did deviate from recommended practice.

5
6 Professionals and patients are often used to the presence of a third party during
7 consultations for training purposes, although some of the nurses observed did comment on
8 feeling under pressure to demonstrate that they were following procedures correctly.

9
10 The generalizability of our findings may be limited given that this study took place within one
11 geographical area. However, Leeds is typical of UK cities in terms of social deprivation
12 indices, demographics, characteristics of primary care services and distribution of common
13 diseases such as CHD and diabetes [43]. Furthermore, we sampled a relatively diverse
14 range of practices and found that practice characteristics, such as deprivation and QOF
15 achievement, affected how case-finding was approached. Opportunistic case findings were
16 under-represented in our sample of 63 consultations but we did not find any systematic
17 differences from chronic disease review case findings in our analysis.

18
19 We identified a range of problems with incentivised case-finding for depression. Our
20 accompanying interrupted time series analysis indicates that incentivised case-finding did
21 change clinical behaviour, increasing new depression-related diagnoses and, compared with
22 untargeted patients with chronic illness, perpetuated increasing rates of antidepressant
23 prescribing [29]. It is difficult to predict with any confidence whether greater changes would
24 have occurred if case-finding had been applied with greater fidelity. However, our findings
25 have broader implications for efforts to improve detection of depression in people with
26 chronic illness.

27
28 Specifically, all of patients, professionals and healthcare systems need to be prepared in
29 advance of case-finding. Firstly, for patients, experience with the diagnostic disclosure of
30 illnesses such as dementia and cancer suggests that acceptance is facilitated by a series of
31 negotiated steps rather than a 'one-off' process [44 45]. For example, patients in our study
32 indicated they would have been more receptive to case-finding had they received
33 information beforehand about the higher prevalence of depression in chronic physical illness.

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3 It is also possible that the act of case-finding does form an initial step in helping patients
4 consider and come to terms with a diagnosis of depression, given that we found patients
5 with negative case-finding subsequently consulted with mood problems. Secondly,
6 professional attitudes towards and skills required in the detection of depression need to be
7 examined. Some voiced unease about whether they were incorporating the questions
8 correctly within consultations or uncertainty about how to handle potential new diagnoses,
9 particularly nursing staff. Thirdly, resources and care pathways need to be optimised to
10 accommodate detection and follow up. Patients identified through case-finding are more
11 likely to have mild-moderate rather than severe depression and less likely to benefit from
12 antidepressant treatment [46 47]. Resources are needed to manage those identified through
13 case-finding recommended by clinical guidelines. Health professionals were understandably
14 reluctant to open up a “can of worms” during tightly restricted chronic illness reviews; the
15 exploration of sensitive issues requires greater flexibility in consultation time. We also found
16 instances where positive results on case-finding - were not acted upon given the absence of
17 explicitly agreed pathways within practices.

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34 There are more general lessons beyond depression detection. Mood disorders are not the
35 only sensitive issue raised during chronic illness reviews. Our findings should prompt a
36 reappraisal of how such reviews are designed and implemented for other emotionally-laden
37 problems integral to chronic illness care, such as weight management, sexual dysfunction
38 and alcohol misuse [48]. Health professionals may welcome structured protocols to help
39 ensure coverage of key issues; there is evidence that prompting interventions have a small
40 to modest effect on practice and patient outcomes [49]. However, such approaches have
41 been less successful in addressing relatively complex clinical behaviours, especially for
42 chronic illness management [50]. The subsequent challenge for quality improvement
43 programmes and research is to further explore and evaluate how to develop interventions
44 which can be embedded within primary care systems and consultations to improve
45 population outcomes whilst preserving patient-centred care. The National Institute for Health
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and Care Excellence guidance on implementation recommends direct observation of practice as one way to identify potential barriers to changing practice [51] and although we have demonstrated the value of direct observation in evaluating new policy initiatives compared to (say) interview studies alone, it is not routinely undertaken when introducing new QOF indicators[11].

Incentivised case-finding exacerbated tensions between perceived patient-centredness and the time-limited routine of the consultation. Both professionals and patients reacted to the imposition of case-finding by adapting, or even subverting, the process recommended by national guidance. Despite their apparent simplicity, the case-finding questions are not consultation-friendly, and acceptable alternative ways to raise mood disorders merit further exploration, as well as guidance on how to introduce the questions so patients don't feel depression is something that happens to 'other people' as our patient's awareness theme suggests. Practice teams need clearer guidance on the pathway for people with likely depression which can be accommodated within available systems and resources.

What is already known on this topic

- Case-finding for depression was incentivised in UK primary care to increase depression diagnosis and management.
- Evidence that case-finding has improved depression outcomes is lacking and health care professionals have expressed dissatisfaction with its implementation.

What this study adds

- Patients and health care professionals subverted the standardised process of depression case-finding to suit their consultation style and needs.
- Case-finding needs to be aligned with structured care processes and how healthcare professionals and patients think about mood problems in chronic physical disease.

Ethics Approval

This study was approved by the South West - Exeter Research Ethics Committee (reference 11/SW/0335). The participants gave informed consent before taking part.

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Transparency Declaration

Dr Sarah L Alderson, the lead author (the manuscript's guarantor), affirms that the manuscript is an honest, accurate, and transparent account of the study being reported; that no important aspects of the study have been omitted; and that any discrepancies from the study as planned have been explained.

Data sharing statement

Data sharing: no additional data available.

Contributorship Statement

RF and AH conceived the project. RF was principal investigator. SA and KM designed the study. SA and AR were responsible for running the project. AR was responsible for data collection. All authors interpreted the data and findings. SA wrote the first draft of the manuscript. RF commented on the first draft and all authors commented on further revisions. SA is guarantor of the paper.

Competing interests

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References

1. Goldney RD, Phillips PJ, Fisher LJ, et al. Diabetes, Depression, and Quality of Life. *Diabetes Care* 2004;**27**(5):1066-70 doi: 10.2337/diacare.27.5.1066[published Online First: Epub Date]].
2. Rudisch B, Nemeroff CB. Epidemiology of comorbid coronary artery disease and depression. *Biological Psychiatry* 2003;**54**(3):227-40
3. Carney RM, Freedland KE, Miller GE, et al. Depression as a risk factor for cardiac mortality and morbidity: A review of potential mechanisms. *Journal of Psychosomatic Research* 2002;**53**(4):897-902
4. Anderson RJ, Freedland KE, Clouse RE, et al. The Prevalence of Comorbid Depression in Adults With Diabetes: A meta-analysis. *Diabetes Care* 2001;**24**(6):1069-78 doi: 10.2337/diacare.24.6.1069[published Online First: Epub Date]].
5. Simon GE, VonKorff M. Recognition, management, and outcomes of depression in primary care. 1995(2):99-105
6. Barth J, Schumacher M, Herrmann-Lingen C. Depression as a Risk Factor for Mortality in Patients With Coronary Heart Disease: A Meta-analysis. *Psychosom. Med.* 2004;**66**(6):802-13 doi: 10.1097/01.psy.0000146332.53619.b2[published Online First: Epub Date]].
7. Katon W, Ciechanowski P. Impact of major depression on chronic medical illness. *Journal of Psychosomatic Research* 2002;**53**(4):859-63
8. National Institute of Clinical Excellence. Depression in adults with a chronic physical health problem: treatment and management. NICE. : NICE, 2009.
9. New Zealand Guidelines Group. Identification of Common Mental Disorders and Management of Depression in Primary Care. An Evidence-based Best Practice Guideline. Wellington, 2008.
10. US Preventative Services Task Force. Screening for Depression in Adults: U.S. Preventive Services Task Force Recommendation Statement. *Annals of Internal Medicine* 2009;**151**(11):784-92 doi: 10.1059/0003-4819-151-11-200912010-00006[published Online First: Epub Date]].
11. University of Birmingham and University of York Health Economics Consortium. NM49 indicator development feedback report 2012.
12. BMJ Best Practice. Screening: Patient Health Questionnaire-2 (PHQ-2). BMJ Best Practice 2010. <http://bestpractice.bmj.com/best-practice/monograph/55/prevention.html>.
13. Health and Social Care Information Centre. Quality Outcomes Framework 2012/13 results. Secondary Quality Outcomes Framework 2012/13 results 2013. <http://qof.hscic.gov.uk/index.asp>.
14. Gilbody S, Sheldon T, House A. Screening and case-finding instruments for depression: a meta-analysis. *Canadian Medical Association Journal* 2008;**178**(8):997-1003 doi: 10.1503/cmaj.070281[published Online First: Epub Date]].
15. Dowrick C, Buchan I. Twelve month outcome of depression in general practice: does detection or disclosure make a difference? *BMJ* 1995;**311**(7015):1274-76
16. Gilbody SM, House A, Sheldon T. Screening and case finding instruments for depression [Systematic Review]. *Cochrane Database of Systematic Reviews* 2009;**3**:3
17. Pignone MP, Gaynes BN, Rushton JL, et al. Screening for Depression in Adults: A Summary of the Evidence for the U.S. Preventive Services Task Force. *Annals of Internal Medicine* 2002;**136**(10):765-76 doi: 10.7326/0003-4819-136-10-200205210-00013[published Online First: Epub Date]].

- 1
2
3 18. Gilbody S, Sheldon T, Wessely S. Should we screen for depression? *BMJ* 2006;**332**(7548):1027-30
4 doi: 10.1136/bmj.332.7548.1027[published Online First: Epub Date]].
- 5
6 19. National Screening Committee. Programme Appraisal Criteria. Secondary Programme Appraisal
7 Criteria 2013. www.screening.nhs.uk/criteria.
- 8
9 20. Serumaga B, Ross-Degnan D, Avery A, et al. Effect of pay for performance on the management
10 and outcomes of hypertension in the United Kingdom: interrupted time series study. *BMJ*
11 2011;**342**:d108
- 12
13 21. Campbell SM, Reeves D, Kontopantelis E, et al. Effects of Pay for Performance on the Quality of
14 Primary Care in England. *N Engl J Med* 2009;**361**:368-78
- 15
16 22. Scott A, Sivey P, Ait Ouakrim D, et al. The effect of financial incentives on the quality of health
17 care provided by primary care physicians. *Cochrane Database Syst Rev* 2011(9):CD008451
- 18
19 23. Checkland K, Harrison S, McDonald R, et al. Biomedicine, holism and general medical practice:
20 responses to the 2004 General Practitioner contract. *Sociology of Health and Illness*
21 2008;**30**:788-803
- 22
23 24. McDonald R, Harrison S, Checkland K, et al. Impact of financial incentives on clinical autonomy
24 and internal motivation in primary care: ethnographic study. *BMJ* 2007;**334**(7608):1333-34
- 25
26 25. Maisey S, Steel N, Marsh R, et al. Effects of payment for performance in primary care: qualitative
27 interview study. *Journal of Health Services Research & Policy* 2008;**13**(3):133-39 doi:
28 10.1258/jhsrp.2008.007118[published Online First: Epub Date]].
- 29
30 26. Mitchell C, Dwyer R, Hagan T, et al. Impact of the QOF and the NICE guideline in the diagnosis
31 and management of depression: a qualitative study. *Br. J. Gen. Pract.* 2011;**61**(586):e279-e89
32 doi: 10.3399/bjgp11X572472[published Online First: Epub Date]].
- 33
34 27. Coventry PA, Hays R, Dickens C, et al. Talking about depression: a qualitative study of barriers to
35 managing depression in people with long term conditions in primary care. *BMC Fam Pract*
36 2011;**12**:10 doi: 10.1186/1471-2296-12-10[published Online First: Epub Date]].
- 37
38 28. Dowrick C, Leydon GM, McBride A, et al. Patients' and doctors' views on depression severity
39 questionnaires incentivised in UK quality and outcomes framework: qualitative study. *Br.*
40 *Med. J.* 2009;**338**:6 doi: b663
41 10.1136/bmj.b663[published Online First: Epub Date]].
- 42
43 29. McLintock K, Russell A, West R, et al. Effect of financial incentives on screening for depression in
44 patients with chronic disease in the United Kingdom: an interrupted time series study.
45 Manuscript in preparation 2013
- 46
47 30. Practitioners RCoG. Supporting Carers: An action guide for general practitioners and their teams.:
48 Royal College of General Practitioners, 2011.
- 49
50 31. Burden AD, Boon MH, Leman J, et al. Diagnosis and management of psoriasis and psoriatic
51 arthritis in adults: summary of SIGN guidance. *BMJ* 2010;**341** doi:
52 10.1136/bmj.c5623[published Online First: Epub Date]].
- 53
54 32. Collier F, Smith RC, Morton CA. Diagnosis and management of hidradenitis suppurativa. *BMJ*
55 2013;**346** doi: 10.1136/bmj.f2121[published Online First: Epub Date]].
- 56
57 33. Emerson RM, Fretz RI, Shaw LL. *Writing ethnographic fieldnotes*. 2nd ed: University of Chicago
58 Press, 2011.
- 59
60 34. Anekwe L. QOF depression indicators face axe. *Pulse* 2011(June 2011)

- 1
2
3 35. Maxwell M, Harris F, Hibberd C, et al. A qualitative study of primary care professionals' views of
4 case finding for depression in patients with diabetes or coronary heart disease in the UK.
5 BMC Fam Pract 2013;**14**:46
6
7 36. Chew-Graham CA, Hunter C, Langer S, et al. How QOF is shaping primary care review
8 consultations: a longitudinal qualitative study. BMC Fam Pract 2013;**14**(1):103
9
10 37. Campbell SM, McDonald R, Lester H. The experience of pay for performance in English family
11 practice: a qualitative study. Annals of Family Medicine 2008;**6**(3):228-34
12
13 38. Hannon KL, Lester HE, Campbell SM. Patients' views of pay for performance in primary care: a
14 qualitative study. Br. J. Gen. Pract.;**62**(598):e322-e28 doi: 10.3399/bjgp12X641438[published
15 Online First: Epub Date]].
16
17 39. Lester H, Matharu T, Mohammed MA, et al. Implementation of pay for performance in primary
18 care: a qualitative study 8 years after introduction. Br. J. Gen. Pract. 2013;**63**(611):e408-e15
19 doi: 10.3399/bjgp13X668203[published Online First: Epub Date]].
20
21 40. Rousseau N, McColl E, Newton J, et al. Practice based, longitudinal, qualitative interview study of
22 computerised evidence based guidelines in primary care. BMJ 2003;**326**(7384):314 doi:
23 10.1136/bmj.326.7384.314[published Online First: Epub Date]].
24
25 41. Craig P, Dieppe P, Macintyre S, et al. Developing and evaluating complex interventions: the new
26 Medical Research Council guidance. BMJ 2008;**337** doi: 10.1136/bmj.a1655[published Online
27 First: Epub Date]].
28
29 42. Dixon-Woods M, Leslie M, Bion J, et al. What Counts? An Ethnographic Study of Infection Data
30 Reported to a Patient Safety Program. Milbank Quarterly 2012;**90**(3):548-91 doi:
31 10.1111/j.1468-0009.2012.00674.x[published Online First: Epub Date]].
32
33 43. Public Health England. National General Practice Profiles - Leeds PCT. Secondary National
34 General Practice Profiles - Leeds PCT 2013.
35 [http://www.apho.org.uk/PracProf/Profile.aspx#mod,2,pyr,2012,pat,2,par,E16000074,are,-](http://www.apho.org.uk/PracProf/Profile.aspx#mod,2,pyr,2012,pat,2,par,E16000074,are,-sid1,2000002,ind1,243-4,sid2,2000005,ind2,-)
36 [sid1,2000002,ind1,243-4,sid2,2000005,ind2,-](http://www.apho.org.uk/PracProf/Profile.aspx#mod,2,pyr,2012,pat,2,par,E16000074,are,-sid1,2000002,ind1,243-4,sid2,2000005,ind2,-)
37
38 44. Fallowfield L, Jenkins V. Effective communication skills are the key to good cancer care. European
39 journal of cancer (Oxford, England : 1990) 1999;**35**(11):1592-7
40
41 45. Lecouturier J, Bamford C, Hughes J, et al. Appropriate disclosure of a diagnosis of dementia:
42 identifying the key behaviours of 'best practice'. BMC Health Services Research 2008;**8**(1):1-
43 10 doi: 10.1186/1472-6963-8-95[published Online First: Epub Date]].
44
45 46. Coyne JC, Schwenk TL, Fechner-Bates S. Nondetection of depression by primary care physicians
46 reconsidered. General Hospital Psychiatry 1995;**17**(1):3-12 doi:
47 [http://dx.doi.org/10.1016/0163-8343\(94\)00056-J](http://dx.doi.org/10.1016/0163-8343(94)00056-J)[published
48 Online First: Epub Date]].
49
50 47. Arroll B, Goodyear-Smith F, Crengle S, et al. Validation of PHQ-2 and PHQ-9 to screen for major
51 depression in the primary care population. Ann Fam Med 2010;**8**(4):348-53 doi:
52 10.1370/afm.1139[published Online First: Epub Date]].
53
54 48. Crosson JC, Heisler M, Subramanian U, et al. Physicians' Perceptions of Barriers to Cardiovascular
55 Disease Risk Factor Control among Patients with Diabetes: Results from the Translating
56 Research into Action for Diabetes (TRIAD) Study. The Journal of the American Board of
57 Family Medicine 2010;**23**(2):171-78 doi: 10.3122/jabfm.2010.02.090125[published Online
58 First: Epub Date]].
59
60 49. Shojania Kaveh G, Jennings A, Mayhew A, et al. The effects of on-screen, point of care computer
reminders on processes and outcomes of care. Cochrane Database of Systematic Reviews
2009; (3). <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD001096.pub2/abstract>.

1
2
3 50. Grimshaw JM, Eccles MP, et al. Knowledge translation of research findings. Implementation
4 Science 2012;7(50):1-29

5
6 51. National Institute for Health and Care Excellence. Into practice guide: Using NICE guidance and
7 quality standards to improve practice, 2013.
8
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10
11
12
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For peer review only

Table 1 – Observed practice characteristics

Surgery	QOF score*	List Size*	Deprivation Score*	Patients Recruited
Practice A	Low	Low	Low	3
Practice B	Low	High	High	13
Practice C	Low	High	Low	5
Practice D	High	High	Low	6
Practice E	High	High	High	6
Practice F	High	Low	High	5
Practice G	Low	High	Low	5
Practice H	Low	Low	Low	5
Practice I	High	High	Low	4
Practice J	Low	Low	High	5
Practice K	Low	Low	High	4
Practice L	High	Low	Low	2

* Compared to Primary Care Trust median

Table 2 - Patient demographics in observed consultations

	<u>No. of patients</u>	<u>% of patients</u>
<u>Gender</u>		
Female	21	33%
Male	42	67%
<u>Age group</u>		
18-30	7	11%
31-50	5	8%
51-64	18	29%
65-79	28	44%
80+	5	8%
<u>Chronic Illness</u>		
CHD	13	21%
DM	46	73%
CHD & DM	4	6%
<u>Ethnicity</u>		
White British	49	78%
Mixed British	1	2%
White Irish	2	3%
Chinese	1	2%
Black Caribbean	5	8%
Pakistani	3	5%
British Asian	1	2%
Indian	1	2%
<u>Previous diagnosis of depression</u>		
Yes	9	14%
No	54	86%

Figure 1. Flow chart of idealised depression case-finding process and barriers identified.

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3 **Incentivised case finding for depression in patients with chronic heart disease and**
4 **diabetes in primary care: an ethnographic study**
5

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Abstract

Objective

To examine the process of case-finding for depression in people with diabetes and coronary heart disease within the context of a pay-for-performance scheme.

Design

Ethnographic study drawing upon observations of practice routines and consultations, debriefing interviews with staff and patients, and review of patient records.

Setting

General practices in Leeds, United Kingdom.

Participants

Twelve purposively sampled practices with a total of 119 staff; 63 consultation observations; and 57 patient interviews.

Main outcome measure

Audio-recorded consultations and interviews with patients and health care professionals along with observation field notes were thematically analysed. We assessed outcomes of case-finding from patient records.

Results

Case-finding exacerbated the discordance between patient and professional agendas, the latter already dominated by the tightly structured and time-limited nature of chronic illness reviews. Professional beliefs and abilities affected how case-finding was undertaken; there was uncertainty about how to ask the questions, particularly amongst nursing staff.

Professionals were often wary of opening an emotional “can of worms.” Subsequently, patient responses potentially suggesting emotional problems could be prematurely shut down by professionals. Patients did not understand why they were asked questions about depression. This sometimes led to defensive or even defiant answers to case-finding.

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3 Follow up of patients highlighted inconsistent systems and lines of communication for
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5 dealing with positive results on case-finding ~~screened positive cases~~.

6 7 *Conclusions*

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10 Case-finding does not fit naturally within consultations; both professional and patient
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12 reactions somewhat subverted the process recommended by national guidance. Quality
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14 improvement strategies will need to take account of our results in two ways. First, despite
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16 their apparent simplicity, the case-finding questions are not consultation-friendly, and
17
18 acceptable alternative ways to raise the issue of depression need to be supported. Second,
19
20 case-finding needs to operate within structured pathways which can be accommodated
21
22 within available systems and resources.

23 24 **Strengths and limitations of this study**

25 26 **Strengths**

- 27 • Multi-site ethnography of broadly representative general practices
- 28 • Triangulation through use of multiple sources of data

29 30 **Limitations**

- 31 • Potential for clinician and patient behaviour to alter as a response to being observed
- 32 • Short periods of observation in each practice limiting range of types of behaviour
33 observed
- 34 • Observations within one geographical area, thereby potentially limiting
35 generalisability

Introduction

The detection and management of depression associated with chronic physical illness represents a major challenge for primary care. Depression is twice as common in those with chronic physical illness such as coronary heart disease (CHD) and diabetes compared to those without chronic physical illness [1-4]. Such co-morbidity can make depression hard to recognize, especially as symptoms of depression (such as fatigue) overlap with those of chronic physical illnesses [5]. Co-morbidity is also associated with poorer outcomes, including mortality [3 6 7]. One response is case-finding, defined as selective screening for depression in populations at high risk, such as those with chronic illness. This has been recommended by national guidance in the UK [8] and elsewhere. [9 10]. The Quality and Outcomes Framework (QOF), a pay-for-performance scheme in UK primary care, rewarded depression case-finding using two standard screening questions from the Patient Health Questionnaire-2 (PHQ-2) in all patients with CHD or diabetes [11]. The PHQ-2 asks, 'In the past two weeks, have you been bothered by: little interest or pleasure in doing things; and feeling down, depressed or hopeless?' [12] Routine data suggested high levels of [screening case-finding](#), with a national average of 86% of eligible patients screened in 2011-12 [13].

However, there are problems with both the rationale underpinning this recommendation and the means undertaken to promote its implementation in the UK.

Firstly, there is no evidence that case-finding for depression by itself improves patient outcomes [14]. For case-finding to be effective it is important that potential cases are further assessed, diagnosed and offered appropriate clinical management within a structured clinical pathway [15-17]. There was no closely allied incentive in the QOF programme for subsequent patient care. Case-finding should also be considered against other recommended criteria for screening tests, such as acceptability and having an agreed policy about whom to treat as patients [18 19].

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3 Secondly, evidence on the effects of financial incentives on primary care practice is, at best,
4 mixed [20-22]. There are concerns that such incentives undermine professionals' intrinsic
5 motivation, patient-centeredness, and continuity of care and have led to a 'tick box' culture
6 as health professionals work through checklists for chronic illness management [21 23-25].
7 Health professionals themselves have expressed dissatisfaction with incentivised depression
8 management, particularly the use of incentivised depression severity measurements,
9 although patients value their use within consultations. [26-28].
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18 Our accompanying interrupted time series analysis found that incentivised case finding
19 increased new depression-related diagnoses in people with diabetes and CHD and
20 perpetuated rising trends in new prescriptions of antidepressants [29]. Even though this
21 incentivised case finding ceased in 2013 due to lack of evidence of patient benefit², there
22 are continuing calls for 'something to be done' to detect and treat depression in high risk
23 groups [30-32]. However, the professional and patient experiences of incentivised case-
24 finding, how it affected clinical care, and its fit with the routines of practice life are poorly
25 understood. We investigated the process of incentivised case-finding during scheduled and
26 opportunistic reviews of patients with diabetes and CHD.
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38 **Methods**

39 *Design and setting*

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41 Our ethnographic design combined direct observation with interviews and review of patient
42 records. We wanted to build an in-depth understanding of how patient case-finding was
43 conducted within the context of everyday practice life and routine patient care. The study
44 took place in general practices in Leeds, UK.
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51 *Participants*

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53 We invited all practices in Leeds to participate. We then sought a purposive sample of
54 practices using a four-by-two sampling frame based upon whether practice QOF
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3 achievement was above or below the Leeds median, further stratified by list size and
4 deprivation profiles. Practices that consented to participate were booked for a week of
5 observation, during which we aimed to observe at least three consultations.
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9 Practices sent letters of invitation and information packs to patients scheduled for chronic
10 disease reviews within the observation week. We also approached patients attending for
11 routine consultations to enable observation of opportunistic case-finding. Practice staff
12 identified patients due to be asked the case-finding questions and asked if they would be
13 interested in participating when they arrived at reception for their appointment. All patients
14 and professionals subsequently observed gave informed consent.
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22 *Data collection and analysis*

23
24 An ethnographer (AR) used a funnelling approach to observe and describe the context of
25 and behaviours within the practice [33], moving to detailed observation and audio-recording
26 of consultations. Observation considered both verbal and non-verbal features including: how
27 case-finding questions are framed and asked; events leading up to questioning; patient
28 verbal and non-verbal reactions and responses; and overall style of the consultation. This
29 style of observation allowed the researcher to layer the analysis of the consultations with
30 contextual information providing a richer interpretation of the observation data. She held
31 semi-structured debriefing interviews with patients who had been observed. The interviews
32 aimed to explore patient views on the process and experience of the consultation in further
33 depth. Unstructured interviews took place with the health care professionals involved in
34 depression case-finding and notes taken on all discussions regarding depression case-
35 finding. We reviewed patients' medical records six weeks after observation to check for any
36 subsequent clinical events related to depression identification and management. Events
37 included appointments where mood was discussed, telephone consultations, depression
38 severity assessments, referrals to mental health teams or talking therapies and new
39 prescriptions for depression medication.
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3 The perceived relative importance and organisation of QOF-related case-finding may vary
4 throughout the year. To partly ameliorate this we observed two practices towards the end of
5 the financial year when practices are typically working hardest to achieve QOF targets.
6
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8
9 Transcribed data (interviews, observation transcripts and observation notes) were managed
10 using NVivo9 and coded for themes. Thematic analysis was undertaken by two researchers,
11 independently coding for the themes and then comparing codes and themes. The analysis
12 was further refined by using constant comparison of themes, and looking for negative cases
13 in order to examine for similarities and differences within and between the patients'
14 perception and observations in different centres. Finally, to improve reliability and validity of
15 data, we triangulated findings from all three data sources.
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23 24 25 *Ethical review*

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27 The study was approved by National Research Ethics Service Committee South West –
28 Exeter (11/SW/0335).
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33 34 **Results**

35
36 Twelve practices participated and a total of 63 patient consultations were observed (range 2-
37 13 per practice; Table 1). Practice characteristics were relatively balanced, with five having
38 QOF achievement above the median for Leeds, five above median population deprivation
39 scores, and six above median list size. Patients were most commonly male, age 51-79
40 years, and white British (Table 2). Most (73%) participants had diabetes and nine (14%) had
41 a previous diagnosis of depression. Nine of the observed case findings took place
42 'opportunistically' within routine GP appointments. The rest occurred within dedicated
43 chronic disease clinics, usually with nurses.
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52 Based upon available guidance, observations and interviews, we constructed a basic
53 normative model of the process by which case-finding was expected to improve depression
54 detection and treatment (Figure 1). We then identified a number of ways in which
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3 professional and patient behaviours and beliefs and the working patterns of general
4
5 practices subverted or affected the operation of this model. We found five barriers:
6
7 discordance between patient and professional agendas; professional uncertainty around
8
9 how to undertake the case-finding itself; reluctance to open a “can of worms”; patients being
10
11 unaware of depression risk or case-finding taking place; and competing practice priorities
12
13 and inconsistent lines of communication around the management of potential cases of
14
15 depression.

16
17
18 *Discordance between patient and professional agendas*

19
20
21 Case-finding often occurred within tightly structured and time-limited chronic illness reviews
22
23 required to document QOF processes of care, and appeared to exacerbate existing
24
25 discordance. This led to professionals disregarding attempts by patients to steer the
26
27 consultation around to their own perceived needs. Patients were often not focused on and
28
29 often did not understand the purpose of the review process and used the consultation as an
30
31 opportunity to raise other problems. To manage this, professionals often interrupted patients
32
33 or returned the consultation to its purpose, discounting clues that the patient had worries
34
35 related to the chronic disease being reviewed or other illnesses.

36
37 Patient: [talking about hypoglycaemic attacks which were a subject of significant
38
39 anxiety for this patient (revealed in interview after appointment)] *Only time that I went*
40
41 *funny, I had a tooth out and I'd had, I couldn't have any breakfast, or I didn't have any*
42
43 *breakfast, because I don't like to be poorly when I've had teeth out, because I used*
44
45 *to be when I was younger, am I talking and disturbing....*

46
47
48 [Fieldnote] Nurse is trying to measure blood pressure; patient looks agitated.

49
50 Nurse: *Yes, I think you just probably need to just be quiet for a couple of minutes*
51
52 *while I check it, because it's even higher now! We want it to go down! Just try and*
53
54 *relax. OK. Observation 29*

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3 At this stage in the consultation the patient became distressed, apparently wishing to discuss
4 further their worries about hypoglycaemia. The professional subsequently moved the
5 conversation on to another QOF target and no follow up of concerns about hypoglycaemia
6 was arranged. The patient later told the researcher she was extremely worried about hypos
7 and was experiencing consistently low mood and high anxiety. The context of chronic illness
8 reviews was restrictive – in this case an opportunity for direct, subject specific case-finding
9 was missed because of the necessity to ask about and record other items. This represents
10 a missed opportunity for case-finding at a point in the review when the patient might have
11 been receptive to exploring associated mood problems.
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22 Difficulties arose in the consultation when the patient mentioned a problemsomething that
23 the health professional was perceived to be important but unrelated to the disease under
24 review. Sometimes the review had to be abandoned as the patient's agenda became too
25 important to be ignored, or the patient too distressed to continue concentrating on the review.
26
27 This more patient-centred approach appeared to occur more often in practices that had
28 lower than average QOF achievement, suggesting that such practices traded off potential
29 income against responsiveness to patients.
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36 *Professional uncertainty around how to undertake the case-finding itself*

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38 Professional beliefs and abilities affected how case-finding was undertaken. In conversation
39 professionals expressed uncertainty about how best to phrase and ask the questions,
40 particularly nursing staff who told the researcher they sometimes felt insufficiently trained on
41 how to manage patients with possible depression. When asked, they questioned whether
42 they were case-finding for QOF rather than patient benefit. We noticed that those who felt
43 that the case-finding was for the benefit of patients appeared to work in practices that were
44 in areas of low deprivation, where as those in areas of higher deprivation felt there was a
45 lack of time to ask the questions and deal with any responses that might indicate a problem
46 with mood. In the context of a time-restricted consultation they felt overburdened.
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3 Field notes Practice A: [The nurse] referred to QOF as coming from “*on high*” to tell her
4 to incorporate it [case-finding]. She felt depression screening was problematic as they
5 had received “*no training*” in mental health or in screening and they were very
6
7
8
9 “*stretched for time in the appointment.*”
10

11 Professionals avoided directly asking case-finding questions if they were familiar with
12 patients but still recorded case-finding; they expressed beliefs that they could identify mood
13 changes through existing knowledge of patients. They often adapted the questions to suit
14 their consultation style or perceived patient needs.
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19 Sometimes confusion arose when the questions were framed to ask whether the patient was
20 coping with their illness, rather than to assess mood disorders in general. The patient
21 answered that they were managing their condition well but did not talk about their mood.
22 This was because the professionals believed the case-finding was to detect depression
23 associated with chronic disease only, not depression of any cause.
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31 Nurse: *Then so do you feel ok about your diabetes, do you have any, do you worry*
32 *about it, does it bother you at all?* Observation 27
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36 The case-finding questions were usually asked in the middle of chronic disease reviews.
37 Generally the templates for such reviews were followed in order, with depression case-
38 finding often occurring after discussion of alcohol consumption and smoking status. Once
39 asked, the professional would move on to discuss diet and exercise. The case-finding
40 questions appeared out of place in the consultation that mainly involved measuring physical
41 factors rather than mood related problems. When asked about the case-finding, most
42 nurses felt it was difficult to switch from asking something that could be measured (such as
43 weight, units of alcohol consumed) to something more subjective.
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52 *Reluctance to open a “can of worms”*

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55 Professionals at nearly every practice mentioned the term “can of worms” to express unease
56 with case-finding for depression. This metaphor indicated professional perceptions of both
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3 patient discomfort with being asked about emotions and their own emotional labour in asking
4 the questions. “Can of worms” helped articulate the belief that case-finding for depression
5 was anticipated as a problematic part of the consultation and threatened to derail routines.
6
7 Professionals anticipated having to manage and close down answers before patients began
8 to give them; this often informed their immediate response to patients’ answers regardless of
9 what patients said.
10

11
12 Many felt that by identifying a problem, it was their duty to uncover further the scale of the
13 problem and to discuss this further with the patient, rather than requesting that the patient
14 should make an appointment to discuss this with the doctor or when there would be more
15 time to devote to this. It was hard to move the consultation onto the rest of the review. This
16 often led to the questions being asked in a manner that made it difficult for the patient to
17 answer ‘yes’, such as “you have no problems coping, do you?” pre-empting any difficulties
18 the questions may cause.
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30 “Then Nurse 1 said *“it’s a question that makes you sigh, makes your heart heavy,*
31 *because you’re there and you say “you’ve been down and depressed?”* and she said
32 “loads of them saying “yes” and she’s thinking ‘no, you’re not, you’re not, depressed,
33 depressed, you’re just a bit down, a bit fed up, aren’t we all!’ So then she has to say
34 “Oh, why do you think that?” and it starts this 10 minute conversation that she really
35 didn’t want to be having, because she’s had to do three blood pressure readings,
36 loads of blood tests, trouble getting a vein, had to check their feet, loads of faffing
37 around, she’s only got 20 minutes.” Field notes Practice F
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47 Patients seldom answered with a simple “yes” or “no” and brought up specific difficulties,
48 such as bereavement. Following an initial acknowledgement, professionals then tended to
49 move consultations on without discussing the effects of these life events on mood.
50
51 Therefore, professionals prematurely shut down patient responses suggesting emotional
52 problems to reduce the risk of extended consultations.
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57 Nurse: *Are you alright, you haven’t been having little interest in doing things, or?*
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3 Patient: *No, no.*

4 Nurse: *Are you fine, are you okay? That's okay.*

5
6
7 Patient: *It's been 10 years since I've lost [woman's name].*

8
9 Nurse: *Is it, what, is that your wife?*

10
11 Patient: *Yes.*

12
13 Nurse: *10 years? That's a long time, isn't it? Can I just check your tablets then, do*
14 *you take aspirin, [lists medication]...* Observation 23

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16
17
18 Some health care professionals talked about the emotional labour involved in case-finding.
19
20 Discussing depression was seen as being emotionally difficult and required feeling strong in
21 themselves, in order to cope with the answer. The emotional burden was exacerbated by
22 the professional's perception that regardless of the outcome of case-finding, there wouldn't
23 be in any change for the better for the patient. They perceived they were expending a great
24 deal of emotional labour on something that did not improve patient care and this
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29
30 compounded their feelings.

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32
33 “[The nurse] said she screened a woman with COPD who then cried and cried and
34 then refused help and said she would sort herself out. This woman refused support
35 and refused to quit smoking. Then she screened a man who was overweight and
36 she'd just told him how serious his weight was and he cried about his weight and
37 then she offered support with mood and weight loss and he said no. So she said
38 most often it opens a can of worms, is demanding and difficult and rarely does
39 anything come of it.” Field notes practice B

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47 *Patients being unaware of depression risk or case-finding taking place*

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50 Many patients ~~screened~~ undergoing case-finding did not see themselves as the type of
51 people who would be prone to depression and did not understand why they were asked.
52
53 They appreciated the idea that people should experience case-finding for depression but
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55
56 distanced themselves from the identity of those people. This sometimes led to defensive or
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3 even defiant answers, or deflecting questions with humour in an apparent attempt to
4 illustrate how preposterous it was to suspect that they might be suffering from depression.
5
6 This contradictory position of wanting everyone else to experience case-finding, seeing the
7 purpose/necessity of asking the questions but, in contrast, not feeling they should be
8
9 ~~screened-questioned~~ and thus derided the process or made light of it. This illustrates that the
10 case-finding process in itself does not impact on patient self-perception of who may suffer
11 from depression and thus does not enable them to answer the questions honestly and
12 openly. They were concerned that they were being seen as someone who could not cope.
13 This especially occurred when the patient felt they had needed to be defensive over their
14 lifestyle choices, such as diet, exercise, alcohol consumption, just before being
15
16 ~~screenedasked case-finding questions~~. The review was seen as a 'telling off' for not doing
17 the right things which then made it difficult to answer subjective questions about mood.
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27 Nurse: *So during the past month have you been bothered by feeling down or*
28 *depressed or hopeless at all?*
29

30 Patient looks perplexed.

31 Patient: *I'm always...* (His voice cracks and pretends to cry and rub his eyes like a
32 child) *Am I heck!*
33

34 Fieldnote: Nurse shuffles in her seat and leans forward. She's smiling but not 100%
35 comfortable. Observation 24
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42 Interviewed patients articulated the belief that the professionals would pick up mood
43 problems or not coping without the need for such questions. They felt being aware of
44 depression was important in a generalised context but it did not fit with who they were, and
45 so found it hard to understand in the context of a chronic disease review.
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51 Patient: *I mean if you're, if you're down they don't have to ask, they know so they*
52 *start talking about it.* Interview 2
53
54

55 Several patients admitted difficulty with answering questions about mood within the chronic
56 disease review during the interviews. They did not feel it was the appropriate place to
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3 discuss mood and that the chronic disease review took over the consultation. Some
4 mentioned that they would like to be asked at a separate appointment just to cover mood,
5
6 although also understood the difficulties in achieving this.
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9
10 *“Just the fact that it’s like a, a review appointment and that I’m under time pressure*
11 *so it’s not, I feel like if I am to be asked about like depression and something like that,*
12 *there has to be a separate one (I: right) or like something depression, or like mood,*
13 *sort of like mental illness or like anxiety or whatever, like related, an appointment*
14 *related specifically to that or like a clinic specifically related to that.” Interview 21*
15
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19
20 Patients were mostly unaware of the increased prevalence of depression in chronic illness,
21 although felt they understood why it might occur. They suggested that introducing the case-
22 finding questions following an explanation that depression was more common in chronic
23 illness might facilitate disclosure; this rarely happened in practice.
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30 *Researcher: So when the nurse asks you about your mood... just like I’m trying to*
31 *imagine your perspective, why do you think that she’s asking these questions*
32 *usually when you get asked?*
33
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35

36
37 *Patient: I don’t know really, I didn’t know whether it was because of my history [of*
38 *depression] or... I didn’t realise that people with heart problems and diabetes get*
39 *depressed. I suppose if you’re not well or you’ve got on going things with you, I*
40 *suppose it can depress you.” Interview 44*
41
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44

45 *Competing practice priorities and inconsistent lines of communication around the*
46 *management of potential cases of depression*
47
48

49
50 Practices varied in how they prioritised and organised case-finding for depression. Some
51 practices devoted a lot of time and energy whilst others considered that some elements of
52 QOF, such as the depression indicators, required too much effort for too little gain.
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3 Field notes, Practice B: This leads to a debate over the decision between QOF
4 payments and the work put in to achieve those payments. GPs are saying they
5 should “*choose their battles.*”
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9

10 One practice did not concentrate on QOF at all and offered a different style of practice to
11 their patients, with patients being seen as and when they wanted and most staff being
12 unaware of the QOF domains and items needed, or where to find them on the computer
13 system. Despite this, the nursing staff still used the QOF template to conduct the chronic
14 disease reviews.
15
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19

20 “I ask how many patients haven’t been screened for depression in the last 15months.
21
22

23 No one knows how to find this out (including the Practice Manager and the IT guy).”
24

25 Field notes Practice J
26

27 Five out of 63 patients ~~screened-had~~ positive results to case-finding; practices subsequently
28 acted on one of these. Two patients who had screened-negative case-finding subsequently
29 consulted to seek help for mood problems. Our follow up highlighted inconsistent systems
30 and lines of communication within practices for dealing with- positive result on case-finding
31 screen-positive patients. Although GPs were aware that nursing staff undertook case finding,
32 many did not know how a positive screen-case-finding would be communicated to them.
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50 Practices in areas with less deprivation seemed more likely to have a specified system for
51 following up positive case-finding results.
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55 “[The nurse] said if they answered they were depressed she’d do the PHQ9 with
56 them and make them an appointment to see the Dr but she felt the Dr wouldn’t do
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3 anything for them and doing the PHQ9 makes her run late so she's conflicted
4 about how useful it is to screen if you feel no one cares about the result." Field
5 notes Practice A
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9
10 "[The doctor] said she didn't really look at the mental health stuff. I said *"Is there like a*
11 *system in place or does a score of two trigger anything, or?"* and she said *"no, maybe*
12 *we need to look at that."* But she left it there." Field notes Practice F
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16 17 Discussion

18
19 Case-finding for depression did not naturally fit within primary care consultations. It
20 appeared to augment-cause discordance between professionals and patients. Professionals
21 struggled to align case-finding with a person-centred approach and were wary of the risk of
22 patients' emotional issues derailing routine reviews. Professionals believed it was good to
23 ask about mental health but disliked the structure of the PHQ-2 and feeling forced to add it to
24 consultations. They subsequently responded by going 'off script' or discounting cues.
25 Patients sometimes did not understand why the case-finding questions were being asked, or
26 did not see themselves as the type of people prone to depression. This led to defensiveness
27 or even defiance in their responses, especially if not anticipated as part of their review.
28 Practice responses to case finding outcomes were haphazard, which may have reflected
29 professional ambivalence towards depression case-finding and the available treatment
30 options for those identified as having depression.
31

32
33 Case-finding for depression exemplifies what happens when attempts are made to fit
34 apparently straightforward but deceptively complex interventions into primary care
35 consultations and systems. Previously, only anecdotal evidence and interviews with GPs
36 have suggested that implementing case-finding was more difficult than intended [27 34 35].
37

38
39 This study provides clear evidence to the barriers faced by professionals and patients in
40 implementing depression case-finding in practice, as well as observational data of what
41 actually happens in practice that both parties may not be aware of. Implementing
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3 depression case-finding is different to other QOF targets as the topic itself is subject to
4
5 significant stigma from both parties.
6

7
8 This study provides the strongest evidence yet that the principle of interrupting the flow of
9
10 clinical conversation to ask out-of-context questions about sensitive issues has many
11
12 significant barriers in clinical consultations. Much has been written about how QOF checklist
13
14 approaches have disrupted consultation flows and led to the patient agenda being unheard
15
16 [36-39]. This is part of a wider phenomenon. For example, Rousseau *et al* demonstrated
17
18 how a set of computerised prompts conflicted with established consultation processes [40].
19
20 Adding the case-finding questions to these processes is inappropriate when the scripts and
21
22 protocols have already created discordance between agendas. Such experience highlights
23
24 the need for systematic development and evaluation of such interventions to ensure
25
26 acceptability and feasibility before wider roll-out [41]. Despite their apparent simplicity, our
27
28 study has shown that depression case-finding questions were not implemented consistently
29
30 within consultations and practice routines.
31

32
33 Our findings also help explain the lack of benefit of case-finding when it is implemented
34
35 outside of collaborative care models [14]. We identified mixed attitudes towards case-finding
36
37 amongst both professionals and patients, coupled with the absence of agreed pathways for
38
39 patient follow-up and management. Collaborative care, with explicit monitoring and
40
41 structured management of both physical and mental health problems could help alleviate
42
43 some of the barriers identified in this study.
44

45
46 Study limitations mainly related to the nature of our observations, and sampled practices.

47
48 We were aware of the intrusive nature of observation and the likelihood that people behaved
49
50 differently when under observation. For example, professionals may have made more of an
51
52 effort to ask the PHQ2 questions sensitively, or ask them at all. When possible, observation
53
54 began following a period of familiarisation to allow the healthcare professional to grow used
55
56 to the researcher's presence. A week may also be insufficient to fully understand all practice
57
58 processes and relationships; however, similar approaches have produced substantial
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1
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3 insights into healthcare organisational behaviour elsewhere [42]. Even allowing for these
4 limitations, it is striking how often professionals did deviate from recommended practice.

5
6 Professionals and patients are often used to the presence of a third party during
7 consultations for training purposes, although some of the nurses observed did comment on
8 feeling under pressure to demonstrate that they were following procedures correctly.

9
10 The generalizability of our findings may be limited given that this study took place within one
11 geographical area. However, Leeds is typical of UK cities in terms of social deprivation
12 indices, demographics, characteristics of primary care services and distribution of common
13 diseases such as CHD and diabetes [43]. Furthermore, we sampled a relatively diverse
14 range of practices and found that practice characteristics, such as deprivation and QOF
15 achievement, affected how case-finding was approached. Opportunistic case findings were
16 under-represented in our sample of 63 consultations but we did not find any systematic
17 differences from chronic disease review case findings in our analysis.

18
19 We identified a range of problems with incentivised screening case-finding for depression.

20
21 Our accompanying interrupted time series analysis indicates that incentivised case-finding
22 did change clinical behaviour, increasing new depression-related diagnoses and, compared
23 with untargeted patients with chronic illness, perpetuated increasing rates of antidepressant
24 prescribing [29]. It is difficult to predict with any confidence whether greater changes would
25 have occurred if case-finding had been applied with greater fidelity. However, our findings
26 have broader implications for efforts to improve detection of depression in people with
27 chronic illness.

28
29 Specifically, all of patients, professionals and healthcare systems need to be prepared in
30 advance of case-finding. Firstly, for patients, experience with the diagnostic disclosure of
31 illnesses such as dementia and cancer suggests that acceptance is facilitated by a series of
32 negotiated steps rather than a 'one-off' process [44 45]. For example, patients in our study
33 indicated they would have been more receptive to case-finding had they received
34 information beforehand about the higher prevalence of depression in chronic physical illness.

1
2
3 It is also possible that the act of case-finding does form an initial step in helping patients
4 consider and come to terms with a diagnosis of depression, given that we found patients
5 with negative case-finding screen-negative patients subsequently consulted with mood
6
7
8 problems. Secondly, professional attitudes towards and skills required in the detection of
9
10 depression need to be examined. Some voiced unease about whether they were
11
12 incorporating the questions correctly within consultations or uncertainty about how to handle
13
14 potential new diagnoses, particularly nursing staff. Thirdly, resources and care pathways
15
16 need to be optimised to accommodate detection and follow up. Patients identified through
17
18 case-finding are more likely to have mild-moderate rather than severe depression and less
19
20 likely to benefit from antidepressant treatment [46 47]. Resources are needed to manage
21
22 those identified through case-finding recommended by clinical guidelines. Health
23
24 professionals were understandably reluctant to open up a “can of worms” during tightly
25
26 restricted chronic illness reviews; the exploration of sensitive issues requires greater
27
28 flexibility in consultation time. We also found instances where positive results on case-
29
30 finding screen-positives were not acted upon given the absence of explicitly agreed
31
32 pathways within practices.
33
34

35
36 There are more general lessons beyond depression detection. Mood disorders are not the
37
38 only sensitive issue raised during chronic illness reviews. Our findings should prompt a
39
40 reappraisal of how such reviews are designed and implemented for other emotionally-laden
41
42 problems integral to chronic illness care, such as weight management, sexual dysfunction
43
44 and alcohol misuse [48]. Health professionals may welcome structured protocols to help
45
46 ensure coverage of key issues; there is evidence that prompting interventions have a small
47
48 to modest effect on practice and patient outcomes [49]. However, such approaches have
49
50 been less successful in addressing relatively complex clinical behaviours, especially for
51
52 chronic illness management [50]. The subsequent challenge for quality improvement
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54 programmes and research is to further explore and evaluate how to develop interventions
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56 which can be embedded within primary care systems and consultations to improve
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3 population outcomes whilst preserving patient-centred care. The National Institute for Health
4 and Care Excellence guidance on implementation recommends direct observation of
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6 practice as one way to identify potential barriers to changing practice [51] and although we
7
8 have demonstrated the value of direct observation in evaluating new policy initiatives
9
10 compared to (say) interview studies alone, it is not routinely undertaken when introducing
11
12 new QOF indicators[11].

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14
15 Incentivised case-finding exacerbated tensions between perceived patient-centredness and
16
17 the time-limited routine of the consultation. Both professionals and patients reacted to the
18
19 imposition of case-finding by adapting, or even subverting, the process recommended by
20
21 national guidance. Despite their apparent simplicity, the case-finding questions are not
22
23 consultation-friendly, and acceptable alternative ways to raise mood disorders merit further
24
25 exploration, as well as guidance on how to introduce the questions so patients don't feel
26
27 depression is something that happens to 'other people' as our patient's awareness theme
28
29 suggests. ~~If case-finding is to be recommended for other patient groups,~~ Ppractice teams
30
31 need clearer guidance on the pathway for people with likely depression which can be
32
33 accommodated within available systems and resources.
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36 37 **What is already known on this topic**

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39 • Case-finding for depression was incentivised in UK primary care to increase
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41 depression diagnosis and management.
- 42
43 • Evidence that case-finding has improved depression outcomes is lacking and health
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45 care professionals have expressed dissatisfaction with its implementation.

46 47 48 **What this study adds**

- 49
50 • Patients and health care professionals subverted the standardised process of
51
52 depression case-finding to suit their consultation style and needs.
- 53
54 • Case-finding needs to be aligned with structured care processes and how healthcare
55
56

professionals and patients think about mood problems in chronic physical disease.

Ethics Approval

This study was approved by the South West - Exeter Research Ethics Committee (reference 11/SW/0335). The participants gave informed consent before taking part.

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Transparency Declaration

Dr Sarah L Alderson, the lead author (the manuscript's guarantor), affirms that the manuscript is an honest, accurate, and transparent account of the study being reported; that no important aspects of the study have been omitted; and that any discrepancies from the study as planned have been explained.

Data sharing statement

Data sharing: no additional data available.

Contributorship Statement

RF and AH conceived the project. RF was principal investigator. SA and KM designed the study. SA and AR were responsible for running the project. AR was responsible for data

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3 collection. All authors interpreted the data and findings. SA wrote the first draft of the
4
5 manuscript. RF commented on the first draft and all authors commented on further revisions.
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7 SA is guarantor of the paper.
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9 10 **Competing interests**

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12 All authors received funding from National Institute of Health Research to undertake this
13
14 study.
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16 17 **References**

- 18
19 1. Goldney RD, Phillips PJ, Fisher LJ, Wilson DH. Diabetes, Depression, and Quality of Life. *Diabetes*
20 *Care* 2004;**27**(5):1066-70 doi: 10.2337/diacare.27.5.1066[published Online First: Epub Date] | .
21
- 22 2. Rudisch B, Nemeroff CB. Epidemiology of comorbid coronary artery disease and depression.
23 *Biological Psychiatry* 2003;**54**(3):227-40
24
- 25 3. Carney RM, Freedland KE, Miller GE, Jaffe AS. Depression as a risk factor for cardiac mortality and
26 morbidity: A review of potential mechanisms. *Journal of Psychosomatic Research*
27 2002;**53**(4):897-902
28
- 29 4. Anderson RJ, Freedland KE, Clouse RE, Lustman PJ. The Prevalence of Comorbid Depression in
30 Adults With Diabetes: A meta-analysis. *Diabetes Care* 2001;**24**(6):1069-78 doi:
31 10.2337/diacare.24.6.1069[published Online First: Epub Date] | .
32
- 33 5. Simon GE, VonKorff M. Recognition, management, and outcomes of depression in primary care.
34 1995(2):99-105
35
- 36 6. Barth J, Schumacher M, Herrmann-Lingen C. Depression as a Risk Factor for Mortality in Patients
37 With Coronary Heart Disease: A Meta-analysis. *Psychosom. Med.* 2004;**66**(6):802-13 doi:
38 10.1097/01.psy.0000146332.53619.b2[published Online First: Epub Date] | .
39
- 40 7. Katon W, Ciechanowski P. Impact of major depression on chronic medical illness. *Journal of*
41 *Psychosomatic Research* 2002;**53**(4):859-63
42
- 43 8. National Institute of Clinical Excellence. Depression in adults with a chronic physical health
44 problem: treatment and management. NICE. : NICE, 2009.
45
- 46 9. New Zealand Guidelines Group. Identification of Common Mental Disorders and Management of
47 Depression in Primary Care. An Evidence-based Best Practice Guideline. Wellington, 2008.
48
- 49 10. US Preventative Services Task Force. Screening for Depression in Adults: U.S. Preventive Services
50 Task Force Recommendation Statement. *Annals of Internal Medicine* 2009;**151**(11):784-92
51 doi: 10.1059/0003-4819-151-11-200912010-00006[published Online First: Epub Date] | .
52
- 53 11. University of Birmingham and University of York Health Economics Consortium. NM49 indicator
54 development feedback report 2012.
55
- 56 12. BMJ Best Practice. Screening: Patient Health Questionnaire-2 (PHQ-2). *BMJ Best Practice* 2010.
57 <http://bestpractice.bmj.com/best-practice/monograph/55/prevention.html>.
58
- 59 13. Health and Social Care Information Centre. Quality Outcomes Framework 2012/13 results.
60 Secondary Quality Outcomes Framework 2012/13 results 2013.
<http://qof.hscic.gov.uk/index.asp>.

14. Gilbody S, Sheldon T, House A. Screening and case-finding instruments for depression: a meta-analysis. *Canadian Medical Association Journal* 2008;**178**(8):997-1003 doi: 10.1503/cmaj.070281[published Online First: Epub Date]].
15. Dowrick C, Buchan I. Twelve month outcome of depression in general practice: does detection or disclosure make a difference? *BMJ* 1995;**311**(7015):1274-76
16. Gilbody SM, House A, Sheldon T. Screening and case finding instruments for depression [Systematic Review]. *Cochrane Database of Systematic Reviews* 2009;**3**:3
17. Pignone MP, Gaynes BN, Rushton JL, et al. Screening for Depression in Adults: A Summary of the Evidence for the U.S. Preventive Services Task Force. *Annals of Internal Medicine* 2002;**136**(10):765-76 doi: 10.7326/0003-4819-136-10-200205210-00013[published Online First: Epub Date]].
18. Gilbody S, Sheldon T, Wessely S. Should we screen for depression? *BMJ* 2006;**332**(7548):1027-30 doi: 10.1136/bmj.332.7548.1027[published Online First: Epub Date]].
19. National Screening Committee. Programme Appraisal Criteria. Secondary Programme Appraisal Criteria 2013. www.screening.nhs.uk/criteria.
20. Serumaga B, Ross-Degnan D, Avery A, et al. Effect of pay for performance on the management and outcomes of hypertension in the United Kingdom: interrupted time series study. *BMJ* 2011;**342**:d108
21. Campbell SM, Reeves D, Kontopantelis E, Sibbald B, Roland M. Effects of Pay for Performance on the Quality of Primary Care in England. *N Engl J Med* 2009;**361**:368-78
22. Scott A, Sivey P, Ait Ouakrim D, et al. The effect of financial incentives on the quality of health care provided by primary care physicians. *Cochrane Database Syst Rev* 2011(9):CD008451
23. Checkland K, Harrison S, McDonald R, Grant S, Campbell SM, Guthrie B. Biomedicine, holism and general medical practice: responses to the 2004 General Practitioner contract. *Sociology of Health and Illness* 2008;**30**:788-803
24. McDonald R, Harrison S, Checkland K, Campbell S, Roland M. Impact of financial incentives on clinical autonomy and internal motivation in primary care: ethnographic study. *BMJ* 2007;**334**(7608):1333-34
25. Maisey S, Steel N, Marsh R, Gillam S, Fleetcroft R, Howe A. Effects of payment for performance in primary care: qualitative interview study. *Journal of Health Services Research & Policy* 2008;**13**(3):133-39 doi: 10.1258/jhsrp.2008.007118[published Online First: Epub Date]].
26. Mitchell C, Dwyer R, Hagan T, Mathers N. Impact of the QOF and the NICE guideline in the diagnosis and management of depression: a qualitative study. *Br. J. Gen. Pract.* 2011;**61**(586):e279-e89 doi: 10.3399/bjgp11X572472[published Online First: Epub Date]].
27. Coventry PA, Hays R, Dickens C, et al. Talking about depression: a qualitative study of barriers to managing depression in people with long term conditions in primary care. *BMC Fam Pract* 2011;**12**:10 doi: 10.1186/1471-2296-12-10[published Online First: Epub Date]].
28. Dowrick C, Leydon GM, McBride A, et al. Patients' and doctors' views on depression severity questionnaires incentivised in UK quality and outcomes framework: qualitative study. *Br. Med. J.* 2009;**338**:6 doi: b663
10.1136/bmj.b663[published Online First: Epub Date]].
29. McLintock K, Russell A, West R, et al. Effect of financial incentives on screening for depression in patients with chronic disease in the United Kingdom: an interrupted time series study. Manuscript in preparation 2013

- 1
2
3 30. Practitioners RCoG. Supporting Carers: An action guide for general practitioners and their teams.:
4 Royal College of General Practitioners, 2011.
5
6 31. Burden AD, Boon MH, Leman J, Wilson H, Richmond R, Ormerod AD. Diagnosis and management
7 of psoriasis and psoriatic arthritis in adults: summary of SIGN guidance. *BMJ* 2010;**341** doi:
8 10.1136/bmj.c5623[published Online First: Epub Date]].
9
10 32. Collier F, Smith RC, Morton CA. Diagnosis and management of hidradenitis suppurativa. *BMJ*
11 2013;**346** doi: 10.1136/bmj.f2121[published Online First: Epub Date]].
12
13 33. Emerson RM, Fretz RI, Shaw LL. *Writing ethnographic fieldnotes*. 2nd ed: University of Chicago
14 Press, 2011.
15
16 34. Anekwe L. QOF depression indicators face axe. *Pulse* 2011(June 2011)
17
18 35. Maxwell M, Harris F, Hibberd C, et al. A qualitative study of primary care professionals' views of
19 case finding for depression in patients with diabetes or coronary heart disease in the UK.
20 *BMC Fam Pract* 2013;**14**:46
21
22 36. Chew-Graham CA, Hunter C, Langer S, et al. How QOF is shaping primary care review
23 consultations: a longitudinal qualitative study. *BMC Fam Pract* 2013;**14**(1):103
24
25 37. Campbell SM, McDonald R, Lester H. The experience of pay for performance in English family
26 practice: a qualitative study. *Annals of Family Medicine* 2008;**6**(3):228-34
27
28 38. Hannon KL, Lester HE, Campbell SM. Patients' views of pay for performance in primary care: a
29 qualitative study. *Br. J. Gen. Pract.*; **62**(598):e322-e28 doi: 10.3399/bjgp12X641438[published
30 Online First: Epub Date]].
31
32 39. Lester H, Matharu T, Mohammed MA, Lester D, Foskett-Tharby R. Implementation of pay for
33 performance in primary care: a qualitative study 8 years after introduction. *Br. J. Gen. Pract.*
34 2013;**63**(611):e408-e15 doi: 10.3399/bjgp13X668203[published Online First: Epub Date]].
35
36 40. Rousseau N, McColl E, Newton J, Grimshaw J, Eccles M. Practice based, longitudinal, qualitative
37 interview study of computerised evidence based guidelines in primary care. *BMJ*
38 2003;**326**(7384):314 doi: 10.1136/bmj.326.7384.314[published Online First: Epub Date]].
39
40 41. Craig P, Dieppe P, Macintyre S, Michie S, Nazareth I, Petticrew M. Developing and evaluating
41 complex interventions: the new Medical Research Council guidance. *BMJ* 2008;**337** doi:
42 10.1136/bmj.a1655[published Online First: Epub Date]].
43
44 42. Dixon-Woods M, Leslie M, Bion J, Tarrant C. What Counts? An Ethnographic Study of Infection
45 Data Reported to a Patient Safety Program. *Milbank Quarterly* 2012;**90**(3):548-91 doi:
46 10.1111/j.1468-0009.2012.00674.x[published Online First: Epub Date]].
47
48 43. Public Health England. National General Practice Profiles - Leeds PCT. Secondary National
49 General Practice Profiles - Leeds PCT 2013.
50 <http://www.apho.org.uk/PracProf/Profile.aspx#mod,2,pyr,2012,pat,2,par,E16000074,are,-,sid1,2000002,ind1,243-4,sid2,2000005,ind2,->
51
52 44. Fallowfield L, Jenkins V. Effective communication skills are the key to good cancer care. *European*
53 *journal of cancer* (Oxford, England : 1990) 1999;**35**(11):1592-7
54
55 45. Lecouturier J, Bamford C, Hughes J, et al. Appropriate disclosure of a diagnosis of dementia:
56 identifying the key behaviours of 'best practice'. *BMC Health Services Research* 2008;**8**(1):1-
57 10 doi: 10.1186/1472-6963-8-95[published Online First: Epub Date]].
58
59 46. Coyne JC, Schwenk TL, Fechner-Bates S. Nondetection of depression by primary care physicians
60 reconsidered. *General Hospital Psychiatry* 1995;**17**(1):3-12 doi:
[http://dx.doi.org/10.1016/0163-8343\(94\)00056-J](http://dx.doi.org/10.1016/0163-8343(94)00056-J)[published Online First: Epub Date]].

- 1
2
3 47. Arroll B, Goodyear-Smith F, Crengle S, et al. Validation of PHQ-2 and PHQ-9 to screen for major
4 depression in the primary care population. *Ann Fam Med* 2010;**8**(4):348-53 doi:
5 10.1370/afm.1139[published Online First: Epub Date]].
6
7 48. Crosson JC, Heisler M, Subramanian U, et al. Physicians' Perceptions of Barriers to Cardiovascular
8 Disease Risk Factor Control among Patients with Diabetes: Results from the Translating
9 Research into Action for Diabetes (TRIAD) Study. *The Journal of the American Board of*
10 *Family Medicine* 2010;**23**(2):171-78 doi: 10.3122/jabfm.2010.02.090125[published Online
11 First: Epub Date]].
12
13 49. Shojania Kaveh G, Jennings A, Mayhew A, Ramsay Craig R, Eccles Martin P, Grimshaw J. The
14 effects of on-screen, point of care computer reminders on processes and outcomes of care.
15 *Cochrane Database of Systematic Reviews* 2009; (3).
16 <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD001096.pub2/abstract>.
17
18 50. Grimshaw JM, Eccles MP, Lavis JN, Hill SJ, Squires JE. Knowledge translation of research findings.
19 *Implementation Science* 2012;**7**(50):1-29
20
21 51. National Institute for Health and Care Excellence. Into practice guide: Using NICE guidance and
22 quality standards to improve practice, 2013.
23
24
25
26
27
28
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30
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Table 1 – Observed practice characteristics

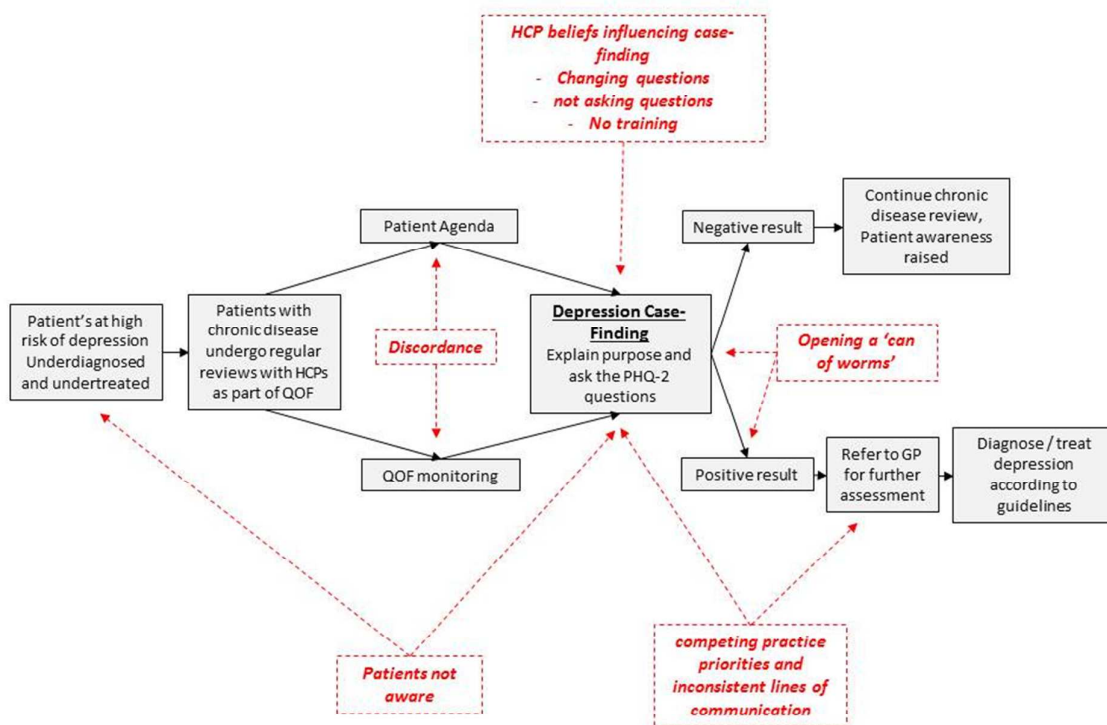
Surgery	QOF score*	List Size*	Deprivation Score*	Patients Recruited
Practice A	Low	Low	Low	3
Practice B	Low	High	High	13
Practice C	Low	High	Low	5
Practice D	High	High	Low	6
Practice E	High	High	High	6
Practice F	High	Low	High	5
Practice G	Low	High	Low	5
Practice H	Low	Low	Low	5
Practice I	High	High	Low	4
Practice J	Low	Low	High	5
Practice K	Low	Low	High	4
Practice L	High	Low	Low	2

* Compared to Primary Care Trust median

Table 2 - Patient demographics in observed consultations

	<u>No. of patients</u>	<u>% of patients</u>
<u>Gender</u>		
Female	21	33%
Male	42	67%
<u>Age group</u>		
18-30	7	11%
31-50	5	8%
51-64	18	29%
65-79	28	44%
80+	5	8%
<u>Chronic Illness</u>		
CHD	13	21%
DM	46	73%
CHD & DM	4	6%
<u>Ethnicity</u>		
White British	49	78%
Mixed British	1	2%
White Irish	2	3%
Chinese	1	2%
Black Caribbean	5	8%
Pakistani	3	5%
British Asian	1	2%
Indian	1	2%
<u>Previous diagnosis of depression</u>		
Yes	9	14%
No	54	86%

Figure 1. Flow chart of idealised depression case-finding process and barriers identified.



review only

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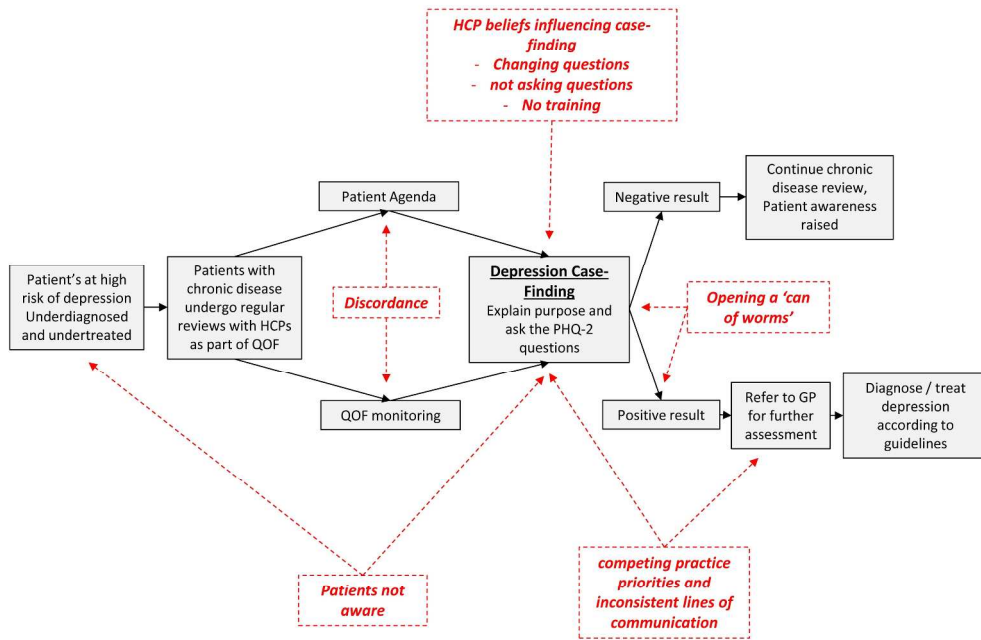


Figure 1. Flow chart of idealised depression case-finding process and barriers identified. 254x190mm (300 x 300 DPI)

Review only