BMJ Open

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Journal:	*BMJ Open*
Manuscript ID:	bmjopen-2014-005146
Article Type:	Research
Date Submitted by the Author:	27-Feb-2014
Complete List of Authors:	Alderson, Sarah; University of Leeds, Leeds Institute of Health Sciences Russell, Amy; University of Leeds, Leeds Institute of Health Sciences McLintock, Kate; University of Leeds, Leeds Institute of Health Sciences Potrata, Barbara; University of Leeds, Leeds Institute of Health Sciences House, AO; Academic Unit of Psychiatry, Foy, Robbie; University of Leeds, Leeds Institute of Health Sciences
Primary Subject Heading:	General practice / Family practice
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

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 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

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

Conclusions.

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

Strengths and limitations of this study

Strengths

- Multi-site ethnography of typical general practices
- Triangulation through use of multiple sources of data

Limitations

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

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

as health professionals work through checklists for chronic illness management [19 21-23]. Health professionals themselves have expressed dissatisfaction with incentivised depression management [24 25].

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

Methods

Design and setting

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

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], 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. We reviewed patients' medical records six weeks after observed screening to check for any subsequent clinical events related to depression identification and management.

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.

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, 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.

Ethical review

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

Results

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 commonly male, age 51-79 years, and white British (Table 2). Most (79%) 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.

Six key themes emerged: discordance between patient and professional agendas; professional beliefs affecting how screening was undertaken; case-finding as opening a "can of worms"; patient existential beliefs affecting their responses; case finding as a means to reduce stigma; and practice priorities and organisation.

Discordance between patient and professional agendas

Case finding exacerbated the discordance between the patient and professional agendas, the latter already dominated by the need for a tightly structured and time-limited interaction to document QOF processes. This led to professionals disregarding attempts by patients to steer the consultation around to their own perceived needs. Patients were often not focused on the review process and used the consultation as an opportunity to raise other problems.

Professionals often interrupted patients or returned the consultation to its purpose, discounting clues that the patient had worries related to the chronic disease being reviewed or other illnesses.

> Patient: [talking about hypoglycaemic attacks] *Only time that I went funny, I had a tooth out and I'd had, I couldn't have any breakfast, or I didn't have any breakfast, because I don't like to be poorly when I've had teeth out, because I used to be when I was younger, am I talking and disturbing….*
>
> [Fieldnote] Nurse is trying to measure blood pressure; patient looks agitated.
>
> Nurse: *Yes, I think you just probably need to just be quiet for a couple of minutes while I check it, because it's even higher now! We want it to go down! Just try and relax. OK.* Observation 29

At this stage in the consultation the patient became distressed, apparently wishing to discuss further their worries about hypoglycaemia. This illustrates the restrictive context of disease reviews – in this case hampering further exploration of patient concerns that might have uncovered associated mood problems.

Professional beliefs affecting how the case finding was approached

Professional beliefs and abilities affected how case finding was undertaken. They expressed uncertainty about how best to phrase and ask the questions, particularly nursing staff who sometimes felt insufficiently trained on how to manage patients who screened positive. They questioned whether they were case finding for QOF rather than patient benefit. Professionals avoided directly asking screening questions if they were familiar with patients but still recorded case finding; they believed could identify mood changes through existing knowledge of patients. They often adapted the questions to suit their consultation style or perceived patient needs.

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 a "can of worms"

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

Many patients screened did not see themselves as the type of people who would be prone to depression and did not understand why they were asked. This sometimes led to defensive or even defiant answers, or deflecting questions with humour.

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. 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

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."

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

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).

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. Much has been written about how QOF checklist approaches have disrupted consultation flows and led to the patient agenda being unheard [31-34]. This is part of a wider phenomenon. For example, Rousseau *et al* demonstrated how a set of computerised prompts conflicted with established consultation processes [35]. Such experience highlights the need for systematic development and evaluation of such interventions to ensure acceptability and feasibility before wider roll-out [36]. Despite their apparent simplicity, our study has shown that depression case finding questions were not implemented consistently within consultations and practice routines.

Our findings also help explain the lack of benefit of case finding when it is implemented outside of collaborative care models [14]. We identified mixed attitudes towards case finding amongst both professionals and patients, coupled with the absence of agreed pathways for patient follow-up and management.

Study limitations mainly related to the nature of our observations, and sampled practices. We were aware of the intrusive nature of observation and the likelihood that people behaved differently when under observation. For example, professionals may have made more of an effort to ask the PHQ2 questions sensitively, or ask them at all. When possible, observation began following a period of familiarisation to allow the healthcare professional to grow used to the researcher's presence. A week may also be insufficient to fully understand all practice processes and relationships; however, similar approaches have produced substantial insights into healthcare organisational behaviour elsewhere [37]. Even allowing for these limitations, it is striking how often professionals did deviate from recommended practice. Professionals and patients are often used to the presence of a third party during consultations for training purposes, although some of the nurses observed did comment on feeling under pressure to demonstrate that they were following procedures correctly.

The generalizability of our findings may be limited given that this study took place within one geographical area. However, Leeds is typical of UK cities in terms of social deprivation indices, demographics, characteristics of primary care services and distribution of common diseases such as CHD and diabetes [38]. Furthermore, we sampled a relatively diverse range of practices. Opportunistic case findings were under-represented in our sample of 63 consultations but we did not find any systematic differences from chronic disease review case findings in our analysis.

We identified a range of problems with incentivised screening for depression. Our accompanying interrupted time series analysis indicates that incentivised case finding did change clinical behaviour, increasing new depression-related diagnoses and, compared with

untargeted patients with chronic illness, perpetuated increasing rates of antidepressant prescribing [26]. It is difficult to predict with any confidence whether greater changes would have occurred if case finding had been applied with greater fidelity. However, our findings have broader implications for efforts to improve detection of depression in people with chronic illness.

Specifically, all of patients, professionals and healthcare systems need to be prepared in advance of case finding. Firstly, for patients, experience with the diagnostic disclosure of illnesses such as dementia and cancer suggests that acceptance is facilitated by a series of negotiated steps rather than a 'one-off' process [39 40]. For example, patients in our study indicated they would have been more receptive to case finding had they received information beforehand about the higher prevalence of depression in chronic physical illness. It is also possible that the act of case finding does form an initial step in helping patients consider and come to terms with a diagnosis of depression, given that we found screen negative patients subsequently consulted with mood problems. Secondly, professional attitudes towards and skills required in the detection of depression need to be examined. Some voiced unease about whether they were incorporating the questions correctly within consultations or uncertainty about how to handle potential new diagnoses, particularly nursing staff. Thirdly, resources and care pathways need to be optimised to accommodate detection and follow up. Those who screen positive are more likely to have mild-moderate rather than severe depression and less likely to benefit from antidepressant treatment [41 42]. Resources are needed to manage those identified through case finding recommended by clinical guidelines. Health professionals were understandably reluctant to open up a "can of worms" during tightly restricted chronic illness reviews; the exploration of sensitive issues requires greater flexibility in consultation time. We also found instances where screen-positives were not acted upon given the absence of explicitly agreed pathways within practices.

There are more general lessons beyond depression detection. Mood disorders are not the only sensitive issue raised during chronic illness reviews. Our findings should prompt a

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
• 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.

- 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.

Funding

This paper summarises independent research funded by the National Institute for Health Research (NIHR) under its Research for Patient Benefit (RfPB) Programme (Grant Reference Number PB-PG-0110-21046). The views expressed are those of the authors and not necessarily those of the NHS, the NIHR or the Department of Health. Study sponsors, the University of Leeds, and NIHR RfPB had no role in study design, in the collection, analysis and interpretation of data, in the writing of the report, and in the decision to submit the article for publication. All authors had full access to all of the data in the study and can take responsibility for the integrity of the data and the accuracy of the data analysis.

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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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

	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%

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 guidlines identify people with chronic illness as a key priority area requring 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

PHQ-2 screening, are far lower than expected when compared with published prevalence statistics.(1, 2, 20)

There is a need for a more robust evaluation of the current QOF driven screening for depression to evaluate its true impact upon depression detection and treatment. If, as seems likely, the current screening initiative is not working as intended then we need to understand why: it may reflect a combination of professional and patient ambivalence to depression screening, the context in which screening takes place or how it fits in with other aspects of clinical care.(21)

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

Aim and hypotheses:

This is qualitative inductive type of research and as such is not based on hypotheses.

Primary aim:

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

Secondary aims:

- How does the context and purpose of the chronic illness review for diabetes or CHD affect the process of screening for depression?
- How engaged are patients and healthcare professionals with the process of screening?
- What factors act as barriers to, and which factors promote thorough and comprehensive screening process?

- How do the experiences and outcomes of screening influence any subsequent clinical action?

- How do (this will be done in PhD research) patients perceive the screening process and what are their recommendation for improving it?

- Please note that Interviewing healthcare professionals on their experiences of and views on depression screening will also be done, but these interviews form part of further studies and are not a part of this research.

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

Method:

Inclusion and exclusion criteria:

Inclusion criteria:

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

Exclusion criteria:

1. Decline participation in this study
2. Unable to comply with requirements of this study protocol

Design:

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

Sampling:

A purposive sample of practices within NHS Leeds will be identified, using a 4x2 sampling frame based upon practices with high and low QOF achievements in the DEP1 domain (highest and lowest quartiles), further stratified by list size, deprivation profiles (above and below median), and practice arrangements for chronic illness reviews (dedicated nurse-run clinics versus other arrangements for planned reviews). With two practices in each of 8 cells we will aim to recruit 16 practices.

If recruitment numbers permit we will attempt to stratify this sample further by looking at different demographic and clinical characteristics. As ethnic minority patients are

disproportionally affected by long term conditions (such as diabetes and CHD) and related depression (22), we will recruit them purposively if necessary. For those who are not fluent in English, the patient information sheet and consent forms will be translated into the relevant languages (for example Gujarati, Urdu and/or Hindi), and an interpreter will assist in the debriefing interviews.

Sample Size:

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

Recruitment:

All practices in NHS Leeds will be invited to take part in the study. Practice profile data will be sought from NHS and publicly available resources (e.g. The NHS Information Centre: QOF online results database). They will be recruited through the West Yorkshire Primary Care Research Network research ready practice list and by contacting other practices individually by letter. Non-respondents will be contacted again by telephone and letter to maximise recruitment. Interested practices will be visited by the research team to discuss involvement in the project. Funding has been arranged to compensate practices for the time needed to explain the project as well as for undertaking the project.

Phase one of patient recruitment will begin after practices consent to participate. The letters of invitation (on practice headed paper) and patient information packs, with researchers' contact details for further information, will be sent by patients' GP to relevant patients prior to their planned chronic illness reviews.

Practice-level consent for observations and patient-level consent will be obtained. Patients who have reviews booked by other means (telephone, by the patient) will be informed of the potential observation when they arrive for their review, or by the practice team when pre-booking appointments. On the day of observations, when the patient books in for their appoitment they will be asked at the practice reception if they are interested in participating in the study. Those patients interested in participation will be referred to the researcher and will again have opportunity to ask questions about the research. If they still agree, written consent will be taken by the appropriately trained researcher.

The second phase of recruitment will take place for patients who are due to be asked their PHQ-2 screening questions but are not attending a scheduled routine screening. These patients will be identified by practice staff and asked if they would be interested in participating when they arrive at reception for their appoitments. If they are interested they will be referred to the researcher who will consent them into the research.

Standard ethical safeguards will apply, e.g. ensuring that undue pressure is not exerted upon patients to participate and allowing them to decline after interview

when consent will be asked for again to ensure they are willing to participate (26). Patients will be reminded before observation, before interview and after interview that they are free to withdraw at any time without giving a reason. We will work with our Patient Advisory Panel (see below) and consult with practices to refine these recruitment methods, information packs and consent forms.

Observation:

Screening forms part of the routine chronic illness review for diabetes and CHD in primary care, usually scheduled within nurse-led clinics. A researcher will observe the consultation in person. Observation will consider 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 (e.g. friendly, formal). The main data source of observations will be detailed notes taken by the observer. With participants' permission, we intend to make digital audio-recordings of consultations.

We have considered other means of trying to investigate consultations but have opted for direct observation on the grounds that it is (a) a standard ethnographic technique which allows the researcher to capture both verbal and non-verbal signals, (b) by observing verbal and non-verbal clues and participating in the process of meaning production between professional and the patient during the consultation process, the observer is able to capture explicit and implicit meanings of consultation in great depths; and (c) the observer is not grounded either in the professional's or the patient's perspective and therefore potentially provides a more detached perspective of the consultation. We are aware of the intrusive nature of observation and that people behave differently when observed (e.g. professionals may make more of an 'effort' to ask the PHQ2 questions sensitively). We can ameliorate the effects of being observed for professionals by having a 'run-in' period of familiarisation at each practice. Furthermore, the presence of a third party in consultations is often acceptable to patients in training or routine care. Immediatley following observation, the researcher will briefly speak with the GP or nurse who has conducted the check-up about their reflections on the check-up. This will allow a representation of the opinions of all of the individuals in the check up to form part of the research.

The observations, digital recordings of consultations and (digitally recorded interviews) will be entered in a computer file in a secure computer network as soon as possible. Paper copies and digital recordings of the observations and taped interviews will be destroyed.

Interviews:

Following observation, the researcher will conduct separate debriefing interviews with patients at a private place at the surgery ideally on the day of their appointment,

or within 3 days at a place named by patients. The semi-structured interview will be based on a pre- agreed interview guide. The interviews will last approximately 30 minutes and will be taped with participants' permission prior to verbatim transcription. At the start of the interview patients will give verbal consent to participate which will be audiorecorded. They will be reminded they can withdraw from the study during or after the interview without giving a reason and that this will not affect their healthcare. After the interview the patient will be asked again if they consent to be part of the research and will be asked to sign the second part of the consent form. They will be reminded they can withdraw at any time without giving a reason.

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

Analysis:

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

Data (i.e. observation notes, consultation and interview data) will be coded for themes. Interviews in the languages other than English will be professionally translated. Thematic analysis will be undertaken by two researchers independently coding for the emerging themes and then compare codes and themes. The analysis will be further refined by using constant comparison and contrastive approach, 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, findings will be triangulated from all three data sources.

Ethical issues:

Potential distress

Recent evidence suggests that qualitative interviewing, even when using unstructured interview guides (i.e. those which are not pre-approved by the ethics committees) does not have long-term negative effect which would require psychological treatment. In fact, the participants are far more likely to experience relief after discussing distressing experiences.(23) However, it is nevertheless possible that the participants will experience distress talking about their illness. To address this issue we will make sure that the researcher working on the study will have considerable experience in qualitative research in healthcare and working with vulnerable patient populations and (s)he will be able to handle these issues sensitively.

If the researcher is not able to address participant's distress then the patient will be referred to GP and/or appropriate services. It is also possible that a researcher will estimate that the participant might be depressed and need help even when routine review and screening have not detected increased distress. In such case the researcher will alert GP. This will be made clear in the PIL.

Confidentiality

We will be mindful of protecting participant confidentiality at all times. The paper copies of the observations and all digital recordings will be immediately destroyed after transcription. During transcription all the personal data in the transcripts will be removed and/ or anonymised so the participants' identity will be protected. The participants will be only referred to by their study number which will bear no resemblance to their identity, NHS number, DOB or similar.

Any paper documents (e.g. consent forms) and any information about the participant will be kept in a locked drawer in a locked office. All electronic information will be stored on the University of Leeds' computers which are password protected. The file in which codes are linked to patients' names will only be stored on a password protected computer in a secure network.

Even though we will protect participant confidentiality at all times we will make clear to the participants in the PIL that we do have duty of care towards them. This means that if a researcher believes that a patient might be a danger to himself or herself (e.g. suicide ideation) or others we are obliged to alert appropriate services.

Furthermore, we are aware that some patients might discuss circumstances of potential disagreements, conflicts or tensions with their healthcare providers. In order to protect the anonymity of such participants who will continue to see these professionals but might get identified by such incidents and circumstances, we will take further care to protect their anonymity. We will also take care not to disclose what the professionals might have said about the patients and vice versa.

Informed consent

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

Lone worker policy

Briefing interviews are being conducted on a one-to-one basis between a participant and the researcher. As the participants can choose the time and place of the interview and can opt to being interviewed at their own homes, there is some risk to

the researcher. For this reason the researcher from University of Leeds will follow University's "Lone worker" policy.

Dissemination and policy relevance:

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

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

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

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

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

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

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

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

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

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

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

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

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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.

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

7. **Will I be paid?**

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

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

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

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

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

10. **Complaints**

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

We do not anticipate that any harm will come to you from participating in this research. In the event that something does go wrong and you are harmed during the research and this is due to someone's negligence then you may have grounds for a legal action for compensation against University of Leeds or NHS Leeds but you may have to pay your legal costs. The normal National Health Service complaints mechanisms will still be available to you through the Patient Advice and Liaison Service (see above).

11. **Will my taking part in the study be kept confidential?**

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

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

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

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

If you would like to obtain a copy of the results, please let the researchers know and they will send you a copy when the study is completed.

13. **Who is organising and funding the research?**

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

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

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

15. **Contact for Further Information**

You may obtain more information about this study by contacting the study's researcher Amy M. Russell on 0113 343 0804 or email a.m.russell@leeds.ac.uk or the study's Chief Investigator Sarah Alderson (s.l.alderson@leeds.ac.uk) 0113 3430867 http://www.leeds.ac.uk/hsphr/research/AUPC/rfpb-depression.html

You can also contact the National Institute of Health Research's Patient and Public Involvement Manager: Marianne Miles, marianne.miles@nihr.ac.uk or 0113 34 30440 or People in Research http://www.peopleinresearch.org/ both of whom provide independent advice on taking part in research.

Thank you for reading this.

BMJ Open

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

Journal:	*BMJ Open*
Manuscript ID:	bmjopen-2014-005146.R1
Article Type:	Research
Date Submitted by the Author:	16-Jun-2014
Complete List of Authors:	Alderson, Sarah; University of Leeds, Leeds Institute of Health Sciences Russell, Amy; University of Leeds, Leeds Institute of Health Sciences McLintock, Kate; University of Leeds, Leeds Institute of Health Sciences Potrata, Barbara; University of Leeds, Leeds Institute of Health Sciences House, AO; Academic Unit of Psychiatry, Foy, Robbie; University of Leeds, Leeds Institute of Health Sciences
Primary Subject Heading:	General practice / Family practice
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

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. 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.

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

Conclusions

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

Strengths and limitations of this study

Strengths

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

Limitations

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

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

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

Methods

Design and setting

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

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 [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. 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 observation to check for any subsequent clinical events 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.

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.

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 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.

Ethical review

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

Results

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 most commonly male, age 51-79 years, and white British (Table 2). Most (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.

Based upon available guidance, observations and interviews, we constructed a basic normative model of the process by which case-finding was expected to improve depression detection and treatment (Figure 1). We then identified a number of ways in which professional and patient behaviours and beliefs and the working patterns of general practices subverted or affected the operation of this model. We found five barriers: discordance between patient and professional agendas; professional uncertainty around

how to undertake the case-finding itself; reluctance to open a "can of worms"; patients being unaware of depression risk or case-finding taking place; and competing practice priorities and inconsistent lines of communication around the management of potential cases of depression.

Discordance between patient and professional agendas

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

> Patient: [talking about hypoglycaemic attacks which were a subject of significant anxiety for this patient (revealed in interview after appointment)] *Only time that I went funny, I had a tooth out and I'd had, I couldn't have any breakfast, or I didn't have any breakfast, because I don't like to be poorly when I've had teeth out, because I used to be when I was younger, am I talking and disturbing….*
>
> [Fieldnote] Nurse is trying to measure blood pressure; patient looks agitated.
>
> Nurse: *Yes, I think you just probably need to just be quiet for a couple of minutes while I check it, because it's even higher now! We want it to go down! Just try and relax. OK.* Observation 29

At this stage in the consultation the patient became distressed, apparently wishing to discuss further their worries about hypoglycaemia. The professional subsequently moved the conversation on to another QOF target and no follow up of concerns about hypoglycaemia was arranged. The patient later told the researcher she was extremely worried about hypos

and was experiencing consistently low mood and high anxiety. The context of chronic illness reviews was restrictive – in this case an opportunity for direct, subject specific case-finding was missed because of the necessity to ask about and record other items. This represents a missed opportunity for case-finding at a point in the review when the patient might have been receptive to exploring associated mood problems.

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

Professional uncertainty around how to undertake the case-finding itself

Professional beliefs and abilities affected how case-finding was undertaken. 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 with possible depression. When asked, they questioned whether they were case-finding for QOF rather than patient benefit. 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 and deal with any responses that might indicate a problem with mood. In the context of a time-restricted consultation they felt overburdened.

> 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*."

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

> 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

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

Reluctance to open a "can of worms"

Professionals at nearly every practice mentioned the term "can of worms" to express unease with case-finding for depression. This metaphor indicated professional perceptions of both patient discomfort with being asked about emotions and their own emotional labour in asking the questions. "Can of worms" helped articulate the belief that case-finding for depression was anticipated as a problematic part of the consultation and threatened to derail routines. Professionals anticipated having to manage and close down answers before patients began

to give them; this often informed their immediate response to patients' answers regardless of what patients said.

Many felt that by identifying a problem, it was their duty to uncover further the scale of the problem and to discuss this further with the patient, rather than requesting that the patient should make an appointment to discuss this with the doctor or when there would be more time to devote to this. It was hard to move the consultation onto the rest of the review. This 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

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

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

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

Many patients screened did not see themselves as the type of people who would be prone to depression and did not understand why they were asked. They appreciated the idea that people should experience case-finding for depression but distanced themselves from the identity of those people. This sometimes led to defensive or even defiant answers, or deflecting questions with humour in an apparent attempt to illustrate how preposterous it was to suspect that they might be suffering from depression. This contradictory position of wanting everyone else to experience case-finding, seeing the purpose/necessity of asking the questions but, in contrast, not feeling they should be screened and thus derided the

process or made light of it. This illustrates that the case-finding process in itself does not impact on patient self-perception of who may suffer from depression and thus does not enable them to answer the questions honestly and openly. They were concerned that they were being seen as someone who could not cope. This 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.

> 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.

> *"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

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."*

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. 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.

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.

This study provides the strongest evidence yet that the principle of interrupting the flow of clinical conversation to ask out-of-context questions about sensitive issues has many

significant barriers in clinical consultations. Much has been written about how QOF checklist approaches have disrupted consultation flows and led to the patient agenda being unheard [35-38]. This is part of a wider phenomenon. For example, Rousseau *et al* demonstrated how a set of computerised prompts conflicted with established consultation processes [39]. Adding the case-finding questions to these processes is inappropriate when the scripts and protocols have already created discordance between agendas. Such experience highlights the need for systematic development and evaluation of such interventions to ensure acceptability and feasibility before wider roll-out [40]. Despite their apparent simplicity, our study has shown that depression case-finding questions were not implemented consistently within consultations and practice routines.

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

Study limitations mainly related to the nature of our observations, and sampled practices. We were aware of the intrusive nature of observation and the likelihood that people behaved differently when under observation. For example, professionals may have made more of an effort to ask the PHQ2 questions sensitively, or ask them at all. When possible, observation began following a period of familiarisation to allow the healthcare professional to grow used to the researcher's presence. A week may also be insufficient to fully understand all practice processes and relationships; however, similar approaches have produced substantial insights into healthcare organisational behaviour elsewhere [41]. Even allowing for these limitations, it is striking how often professionals did deviate from recommended practice. Professionals and patients are often used to the presence of a third party during

consultations for training purposes, although some of the nurses observed did comment on feeling under pressure to demonstrate that they were following procedures correctly.

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

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

Specifically, all of patients, professionals and healthcare systems need to be prepared in advance of case-finding. Firstly, for patients, experience with the diagnostic disclosure of illnesses such as dementia and cancer suggests that acceptance is facilitated by a series of negotiated steps rather than a 'one-off' process [43 44]. For example, patients in our study indicated they would have been more receptive to case-finding had they received information beforehand about the higher prevalence of depression in chronic physical illness. It is also possible that the act of case-finding does form an initial step in helping patients consider and come to terms with a diagnosis of depression, given that we found screen negative patients subsequently consulted with mood problems. Secondly, professional

attitudes towards and skills required in the detection of depression need to be examined. Some voiced unease about whether they were incorporating the questions correctly within consultations or uncertainty about how to handle potential new diagnoses, particularly nursing staff. Thirdly, resources and care pathways need to be optimised to accommodate detection and follow up. Patients identified through case-finding are more likely to have mild-moderate rather than severe depression and less likely to benefit from antidepressant treatment [45 46]. Resources are needed to manage those identified through case-finding recommended by clinical guidelines. Health professionals were understandably reluctant to open up a "can of worms" during tightly restricted chronic illness reviews; the exploration of sensitive issues requires greater flexibility in consultation time. We also found instances where screen-positives were not acted upon given the absence of explicitly agreed pathways within practices.

There are more general lessons beyond depression detection. Mood disorders are not the only sensitive issue raised during chronic illness reviews. Our findings should prompt a 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 [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, 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 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.

Funding

This paper summarises independent research funded by the National Institute for Health Research (NIHR) under its Research for Patient Benefit (RfPB) Programme (Grant Reference Number PB-PG-0110-21046). The views expressed are those of the authors and not necessarily those of the NHS, the NIHR or the Department of Health. Study sponsors, the University of Leeds, and NIHR RfPB had no role in study design, in the collection, analysis and interpretation of data, in the writing of the report, and in the decision to submit the article for publication. All authors had full access to all of the data in the study and can take responsibility for the integrity of the data and the accuracy of the data analysis.

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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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

	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%

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

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

Conclusions~~.~~

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

Strengths and limitations of this study

Strengths

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

Limitations

- Potential for clinician and patient behaviour to alter as a response to being observed
- Short periods of observation in each practice limiting range of types of behaviour observed
- Observations within one geographical area, thereby potentially limiting 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~~is 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)~~CHD or diabetes [11]. The PHQ-2 asks~~:~~, 'In the past ~~2~~two weeks, have you been bothered by: ~~Little~~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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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 ~~[18-20]~~[20-22]. There are concerns that such incentives undermine professionals' intrinsic motivation, patient-centeredness, and continuity of care and have led to a 'tick box' culture as health professionals work through checklists for chronic illness management ~~[19 21-23]~~[21 23-25]. Health professionals themselves have expressed dissatisfaction with incentivised depression management, particularly the use of incentivised depression severity measurements, [~~24 25~~26-28].

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

Methods

Design and setting

Our ethnographic design combined direct observation with interviews and review of patient records. We wanted to build an in-depth understanding of how patient case–finding was conducted within the context of everyday practice life and routine patient care. The study 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.

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.

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.

Ethical review

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

Results

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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~~Six key themes emerged~~Based upon available guidance, observations and interviews, we constructed a basic normative model of the process by which case-finding was expected to improve depression detection and treatment (Figure 1). We then identified a number of ways in which professional and patient behaviours and beliefs and the working patterns of general practices subverted or affected the operation of this model. We found five barriers~~:~~ discordance between patient and professional agendas; professional ~~beliefs affecting~~uncertainty around ~~how screening was undertaken;~~to undertake the ~~case-finding as opening~~itself; reluctance to open ~~a "can of worms"; patient existential beliefs affecting their responses;~~patients being unaware of depression risk or ~~case-finding as a means to reduce stigma~~taking place~~;~~ and ~~competing~~ practice priorities and ~~organisation~~inconsistent lines of communication around the management of potential cases of depression.

Discordance between patient and professional agendas

Case-finding ~~exacerbated the discordance between the patient and professional agendas, the latter already dominated by the need for a~~often occurred within tightly structured and time-limited ~~interaction~~chronic illness reviews required to document QOF processes of care, and appeared to exacerbate existing discordance. This led to professionals disregarding attempts by patients to steer the consultation around to their own perceived needs. Patients were often not focused on and often did not understand the purpose of the review process and used the consultation as an opportunity to raise other problems. ~~Professionals~~To manage this, professionals often interrupted patients or returned the consultation to its purpose, discounting clues that the patient had worries related to the chronic disease being reviewed or other illnesses.

> Patient: [talking about hypoglycaemic attacks~~]~~ which were a subject of significant anxiety for this patient (revealed in interview after appointment)] *Only time that I went 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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breakfast, because I don't like to be poorly when I've had teeth out, because I used to be when I was younger, am I talking and disturbing….

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

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

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

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

Professional ~~beliefs affecting~~uncertainty around how to undertake the case--finding ~~was 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 coping 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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This was because the professionals believed the case-finding was to detect depression associated with chronic disease only, not depression of any cause.

> 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

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

Reluctance to open a "can of worms"

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

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

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

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

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

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

> ~~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

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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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This study provides the strongest evidence yet that the principle of interrupting the flow of clinical conversation to ask out-of-context questions about sensitive issues has many significant barriers in clinical consultations. ~~Much has been written about how QOF checklist~~ approaches have disrupted consultation flows and led to the patient agenda being unheard ~~[31-34]~~[35-38]. This is part of a wider phenomenon. For example, Rousseau *et al* demonstrated how a set of computerised prompts conflicted with established consultation processes ~~[35].~~[39]. Adding the case-finding questions to these processes is inappropriate when the scripts and protocols have already created discordance between agendas. ~~Such~~ experience highlights the need for systematic development and evaluation of such interventions to ensure acceptability and feasibility before wider roll-out ~~[36]. Despite their apparent simplicity, our study has shown that depression case~~ [40]. Despite their apparent simplicity, our study has shown that depression case ~~finding questions were not~~ implemented consistently within consultations and practice routines.

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

Study limitations mainly related to the nature of our observations, and sampled practices. We were aware of the intrusive nature of observation and the likelihood that people behaved differently when under observation. For example, professionals may have made more of an effort to ask the PHQ2 questions sensitively, or ask them at all. When possible, observation began following a period of familiarisation to allow the healthcare professional to grow used to the researcher's presence. A week may also be insufficient to fully understand all practice processes and relationships; however, similar approaches have produced substantial insights into healthcare organisational behaviour elsewhere ~~[37].~~[41]. Even allowing for

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

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

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

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

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

There are more general lessons beyond depression detection. Mood disorders are not the only sensitive issue raised during chronic illness reviews. Our findings should prompt a 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~~

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~~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.

What this study adds

- 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.~~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.

Funding

This paper summarises independent research funded by the National Institute for Health Research (NIHR) under its Research for Patient Benefit (RfPB) Programme (Grant Reference Number PB-PG-0110-21046). The views expressed are those of the authors and not necessarily those of the NHS, the NIHR or the Department of Health. Study sponsors, the University of Leeds, and NIHR RfPB had no role in study design, in the collection, analysis and interpretation of data, in the writing of the report, and in the decision to submit the article for publication. All authors had full access to all of the data in the study and can take responsibility for the integrity of the data and the accuracy of the data analysis.

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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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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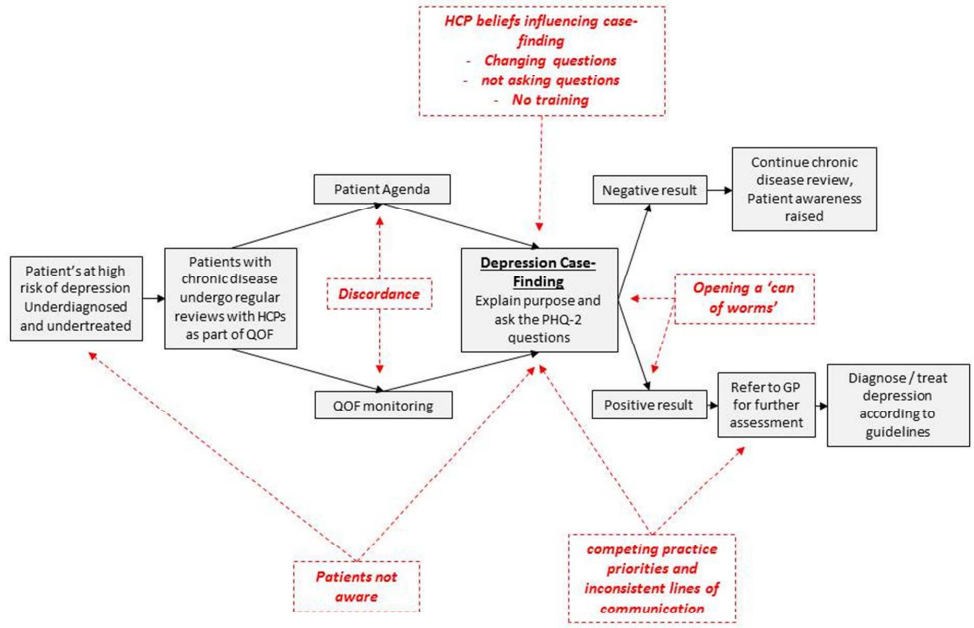
Table 2 - Patient demographics in observed consultations

	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%

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



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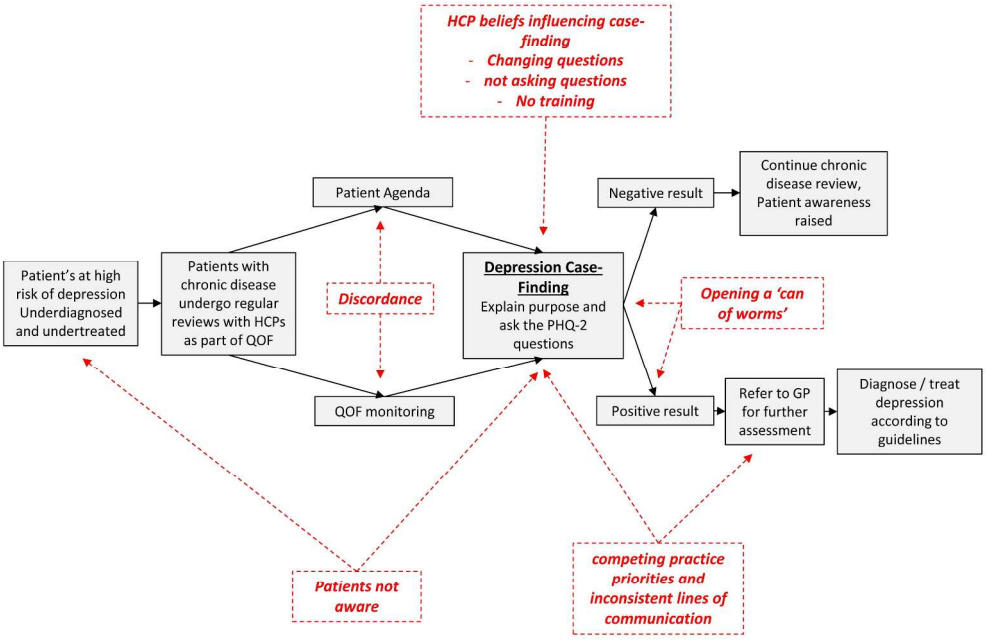

Figure 1. Flow chart of idealised depression case-finding process and barriers identified.
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BMJ Open

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

Journal:	*BMJ Open*
Manuscript ID:	bmjopen-2014-005146.R2
Article Type:	Research
Date Submitted by the Author:	22-Jul-2014
Complete List of Authors:	Alderson, Sarah; University of Leeds, Leeds Institute of Health Sciences Russell, Amy; University of Leeds, Leeds Institute of Health Sciences McLintock, Kate; University of Leeds, Leeds Institute of Health Sciences Potrata, Barbara; University of Leeds, Leeds Institute of Health Sciences House, AO; Academic Unit of Psychiatry, Foy, Robbie; University of Leeds, Leeds Institute of Health Sciences
Primary Subject Heading:	General practice / Family practice
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

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. 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.

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

Conclusions

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

Strengths and limitations of this study

Strengths

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

Limitations

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

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

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

Methods

Design and setting

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

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 [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. 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 observation to check for any subsequent clinical events 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.

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.

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 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.

Ethical review

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

Results

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 most commonly male, age 51-79 years, and white British (Table 2). Most (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.

Based upon available guidance, observations and interviews, we constructed a basic normative model of the process by which case-finding was expected to improve depression detection and treatment (Figure 1). We then identified a number of ways in which

professional and patient behaviours and beliefs and the working patterns of general practices subverted or affected the operation of this model. We found five barriers: discordance between patient and professional agendas; professional uncertainty around how to undertake the case-finding itself; reluctance to open a "can of worms"; patients being unaware of depression risk or case-finding taking place; and competing practice priorities and inconsistent lines of communication around the management of potential cases of depression.

Discordance between patient and professional agendas

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

> Patient: [talking about hypoglycaemic attacks which were a subject of significant anxiety for this patient (revealed in interview after appointment)] *Only time that I went funny, I had a tooth out and I'd had, I couldn't have any breakfast, or I didn't have any breakfast, because I don't like to be poorly when I've had teeth out, because I used to be when I was younger, am I talking and disturbing….*
>
> [Fieldnote] Nurse is trying to measure blood pressure; patient looks agitated.
>
> Nurse: *Yes, I think you just probably need to just be quiet for a couple of minutes while I check it, because it's even higher now! We want it to go down! Just try and relax. OK.* Observation 29

At this stage in the consultation the patient became distressed, apparently wishing to discuss further their worries about hypoglycaemia. The professional subsequently moved the conversation on to another QOF target and no follow up of concerns about hypoglycaemia was arranged. The patient later told the researcher she was extremely worried about hypos and was experiencing consistently low mood and high anxiety. The context of chronic illness reviews was restrictive – in this case an opportunity for direct, subject specific case-finding was missed because of the necessity to ask about and record other items. This represents a missed opportunity for case-finding at a point in the review when the patient might have been receptive to exploring associated mood problems.

Difficulties arose in the consultation when the patient mentioned a problem that the health professional perceived to be important but unrelated to the disease under review. Sometimes the review had to be abandoned as the patient's agenda became too important to be ignored, or the patient too distressed to continue concentrating on the review. This more patient-centred approach appeared to occur more often in practices that had lower than average QOF achievement, suggesting that such practices traded off potential income against responsiveness to patients.

Professional uncertainty around how to undertake the case-finding itself

Professional beliefs and abilities affected how case-finding was undertaken. 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 with possible depression. When asked, they questioned whether they were case-finding for QOF rather than patient benefit. 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 and deal with any responses that might indicate a problem with mood. In the context of a time-restricted consultation they felt overburdened.

> 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*."

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

> 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

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

Reluctance to open a "can of worms"

Professionals at nearly every practice mentioned the term "can of worms" to express unease with case-finding for depression. This metaphor indicated professional perceptions of both

patient discomfort with being asked about emotions and their own emotional labour in asking the questions. “Can of worms” helped articulate the belief that case-finding for depression was anticipated as a problematic part of the consultation and threatened to derail routines. Professionals anticipated having to manage and close down answers before patients began to give them; this often informed their immediate response to patients’ answers regardless of what patients said.

Many felt that by identifying a problem, it was their duty to uncover further the scale of the problem and to discuss this further with the patient, rather than requesting that the patient should make an appointment to discuss this with the doctor or when there would be more time to devote to this. It was hard to move the consultation onto the rest of the review. This 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

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

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

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

Many patients undergoing case-finding did not see themselves as the type of people who would be prone to depression and did not understand why they were asked. They appreciated the idea that people should experience case-finding for depression but distanced themselves from the identity of those people. This sometimes led to defensive or

even defiant answers, or deflecting questions with humour in an apparent attempt to illustrate how preposterous it was to suspect that they might be suffering from depression. This contradictory position of wanting everyone else to experience case-finding, seeing the purpose/necessity of asking the questions but, in contrast, not feeling they should be questioned and thus derided the process or made light of it. This illustrates that the case-finding process in itself does not impact on patient self-perception of who may suffer from depression and thus does not enable them to answer the questions honestly and openly. They were concerned that they were being seen as someone who could not cope. This 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 asked case-finding questions. 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.

> 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.

> *"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

Competing practice priorities

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."*

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 had positive results to case-finding; practices subsequently acted on one of these. Two patients who had negative case-finding subsequently consulted to seek help for mood problems. Our follow up highlighted inconsistent systems and lines of communication within practices for dealing with positive result on case-finding . Although GPs were aware that nursing staff undertook case finding, many did not know how a positive case-finding 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 had a positive result 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.

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 cause 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, anecdotal evidence and interviews with GPs have suggested that implementing case-finding was more difficult than intended [27 34 35]. 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.

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

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

Study limitations mainly related to the nature of our observations, and sampled practices. We were aware of the intrusive nature of observation and the likelihood that people behaved differently when under observation. For example, professionals may have made more of an effort to ask the PHQ2 questions sensitively, or ask them at all. When possible, observation began following a period of familiarisation to allow the healthcare professional to grow used to the researcher's presence. A week may also be insufficient to fully understand all practice processes and relationships; however, similar approaches have produced substantial

insights into healthcare organisational behaviour elsewhere [42]. Even allowing for these limitations, it is striking how often professionals did deviate from recommended practice. Professionals and patients are often used to the presence of a third party during consultations for training purposes, although some of the nurses observed did comment on feeling under pressure to demonstrate that they were following procedures correctly.

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

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

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

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

There are more general lessons beyond depression detection. Mood disorders are not the only sensitive issue raised during chronic illness reviews. Our findings should prompt a 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 [48]. 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 [49]. However, such approaches have been less successful in addressing relatively complex clinical behaviours, especially for chronic illness management [50]. 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 [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.

Funding

This paper summarises independent research funded by the National Institute for Health Research (NIHR) under its Research for Patient Benefit (RfPB) Programme (Grant Reference Number PB-PG-0110-21046). The views expressed are those of the authors and not necessarily those of the NHS, the NIHR or the Department of Health. Study sponsors, the University of Leeds, and NIHR RfPB had no role in study design, in the collection, analysis and interpretation of data, in the writing of the report, and in the decision to submit the article for publication. All authors had full access to all of the data in the study and can take responsibility for the integrity of the data and the accuracy of the data analysis.

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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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

	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%

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

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. 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.

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

Conclusions

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

Strengths and limitations of this study

Strengths

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

Limitations

- Potential for clinician and patient behaviour to alter as a response to being observed
- Short periods of observation in each practice limiting range of types of behaviour observed
- Observations within one geographical area, thereby potentially limiting 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].

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

Our accompanying interrupted time series analysis found that incentivised case finding increased new depression-related diagnoses in people with diabetes and CHD and perpetuated rising trends in new prescriptions of antidepressants [29]. Even though this incentivised case finding ceased in 2013 due to lack of evidence of patient benefit~~2~~, there are continuing calls for 'something to be done' to detect and treat depression in high risk groups [30-32]. However, the professional and patient experiences of incentivised case-finding, how it affected clinical care, and its fit with the routines of practice life are poorly understood. We investigated the process of incentivised case-finding during scheduled and opportunistic reviews of patients with diabetes and CHD.

Methods

Design and setting

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

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 [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. 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 observation to check for any subsequent clinical events 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.

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.

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 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.

Ethical review

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

Results

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 most commonly male, age 51-79 years, and white British (Table 2). Most (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.

Based upon available guidance, observations and interviews, we constructed a basic normative model of the process by which case-finding was expected to improve depression detection and treatment (Figure 1). We then identified a number of ways in which

professional and patient behaviours and beliefs and the working patterns of general practices subverted or affected the operation of this model. We found five barriers: discordance between patient and professional agendas; professional uncertainty around how to undertake the case-finding itself; reluctance to open a "can of worms"; patients being unaware of depression risk or case-finding taking place; and competing practice priorities and inconsistent lines of communication around the management of potential cases of depression.

Discordance between patient and professional agendas

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

> Patient: [talking about hypoglycaemic attacks which were a subject of significant anxiety for this patient (revealed in interview after appointment)] *Only time that I went funny, I had a tooth out and I'd had, I couldn't have any breakfast, or I didn't have any breakfast, because I don't like to be poorly when I've had teeth out, because I used to be when I was younger, am I talking and disturbing….*
>
> [Fieldnote] Nurse is trying to measure blood pressure; patient looks agitated.
>
> Nurse: *Yes, I think you just probably need to just be quiet for a couple of minutes while I check it, because it's even higher now! We want it to go down! Just try and relax. OK.* Observation 29

At this stage in the consultation the patient became distressed, apparently wishing to discuss further their worries about hypoglycaemia. The professional subsequently moved the conversation on to another QOF target and no follow up of concerns about hypoglycaemia was arranged. The patient later told the researcher she was extremely worried about hypos and was experiencing consistently low mood and high anxiety. The context of chronic illness reviews was restrictive – in this case an opportunity for direct, subject specific case-finding was missed because of the necessity to ask about and record other items. This represents a missed opportunity for case-finding at a point in the review when the patient might have been receptive to exploring associated mood problems.

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

Professional uncertainty around how to undertake the case-finding itself

Professional beliefs and abilities affected how case-finding was undertaken. 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 with possible depression. When asked, they questioned whether they were case-finding for QOF rather than patient benefit. 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 and deal with any responses that might indicate a problem with mood. In the context of a time-restricted consultation they felt overburdened.

> 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*."

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

> 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

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

Reluctance to open a "can of worms"

Professionals at nearly every practice mentioned the term "can of worms" to express unease with case-finding for depression. This metaphor indicated professional perceptions of both

patient discomfort with being asked about emotions and their own emotional labour in asking the questions. “Can of worms” helped articulate the belief that case-finding for depression was anticipated as a problematic part of the consultation and threatened to derail routines. Professionals anticipated having to manage and close down answers before patients began to give them; this often informed their immediate response to patients’ answers regardless of what patients said.

Many felt that by identifying a problem, it was their duty to uncover further the scale of the problem and to discuss this further with the patient, rather than requesting that the patient should make an appointment to discuss this with the doctor or when there would be more time to devote to this. It was hard to move the consultation onto the rest of the review. This 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

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

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

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

Many patients ~~screened~~ undergoing case-finding did not see themselves as the type of people who would be prone to depression and did not understand why they were asked. They appreciated the idea that people should experience case-finding for depression but distanced themselves from the identity of those people. This sometimes led to defensive or

even defiant answers, or deflecting questions with humour in an apparent attempt to illustrate how preposterous it was to suspect that they might be suffering from depression. This contradictory position of wanting everyone else to experience case-finding, seeing the purpose/necessity of asking the questions but, in contrast, not feeling they should be ~~screened~~ questioned and thus derided the process or made light of it. This illustrates that the case-finding process in itself does not impact on patient self-perception of who may suffer from depression and thus does not enable them to answer the questions honestly and openly. They were concerned that they were being seen as someone who could not cope. This 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~~asked case-finding questions. 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.

> 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.

> *"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

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."*

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~~ had positive results to case-finding; practices subsequently acted on one of these. Two patients who had ~~screened~~ negative case-finding subsequently consulted to seek help for mood problems. Our follow up highlighted inconsistent systems and lines of communication within practices for dealing with positive result on case-finding ~~screen-positive patients~~. Although GPs were aware that nursing staff undertook case finding, many did not know how a positive ~~screen~~ case-finding 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~~ had a positive result 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.

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~~ cause 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 and interviews with GPs have suggested that implementing case-finding was more difficult than intended [27 34 35]. 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.

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

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

Study limitations mainly related to the nature of our observations, and sampled practices. We were aware of the intrusive nature of observation and the likelihood that people behaved differently when under observation. For example, professionals may have made more of an effort to ask the PHQ2 questions sensitively, or ask them at all. When possible, observation began following a period of familiarisation to allow the healthcare professional to grow used to the researcher's presence. A week may also be insufficient to fully understand all practice processes and relationships; however, similar approaches have produced substantial

insights into healthcare organisational behaviour elsewhere [42]. Even allowing for these limitations, it is striking how often professionals did deviate from recommended practice. Professionals and patients are often used to the presence of a third party during consultations for training purposes, although some of the nurses observed did comment on feeling under pressure to demonstrate that they were following procedures correctly.

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

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

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

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

There are more general lessons beyond depression detection. Mood disorders are not the only sensitive issue raised during chronic illness reviews. Our findings should prompt a 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 [48]. 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 [49]. However, such approaches have been less successful in addressing relatively complex clinical behaviours, especially for chronic illness management [50]. 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 [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. ~~If case-finding is to be recommended for other patient groups, P~~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.

Funding

This paper summarises independent research funded by the National Institute for Health Research (NIHR) under its Research for Patient Benefit (RfPB) Programme (Grant Reference Number PB-PG-0110-21046). The views expressed are those of the authors and not necessarily those of the NHS, the NIHR or the Department of Health. Study sponsors, the University of Leeds, and NIHR RfPB had no role in study design, in the collection, analysis and interpretation of data, in the writing of the report, and in the decision to submit the article for publication. All authors had full access to all of the data in the study and can take responsibility for the integrity of the data and the accuracy of the data analysis.

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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Table 1 – Observed practice characteristics

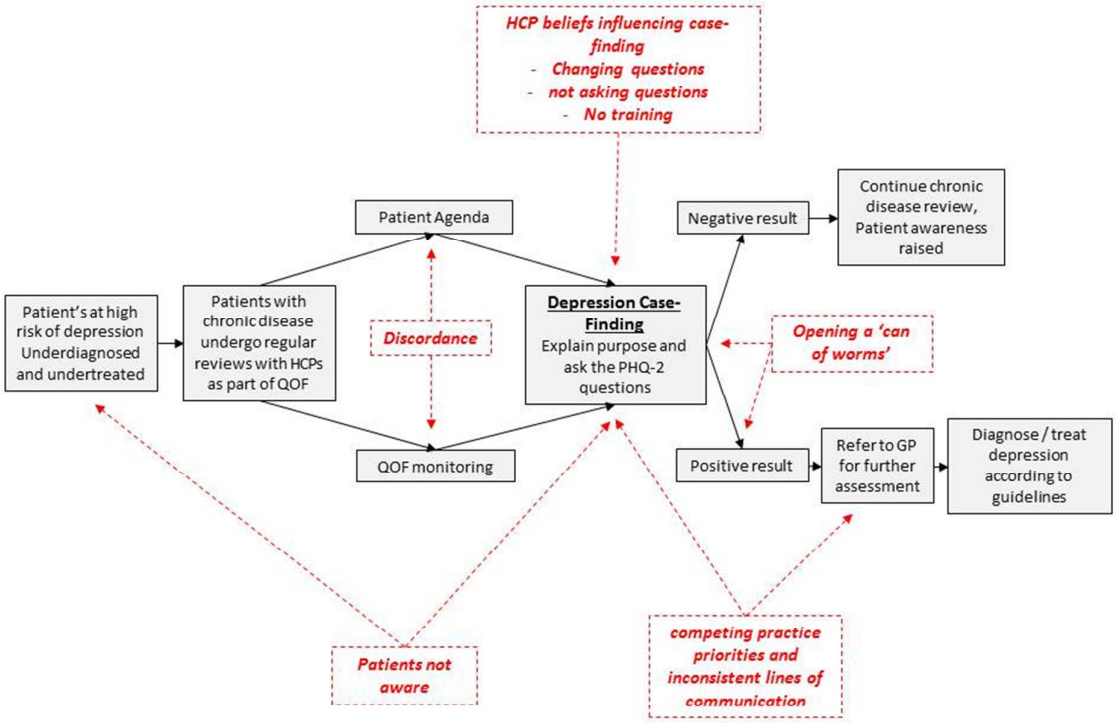
Surgery	QOF score*	List Size*	Deprivation Score*	Patients Recruited
Practice A	Low	Low	Low	3
Practice B	Low	High	High	13
Practice C	Low	High	Low	5
Practice D	High	High	Low	6
Practice E	High	High	High	6
Practice F	High	Low	High	5
Practice G	Low	High	Low	5
Practice H	Low	Low	Low	5
Practice I	High	High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

	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%

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



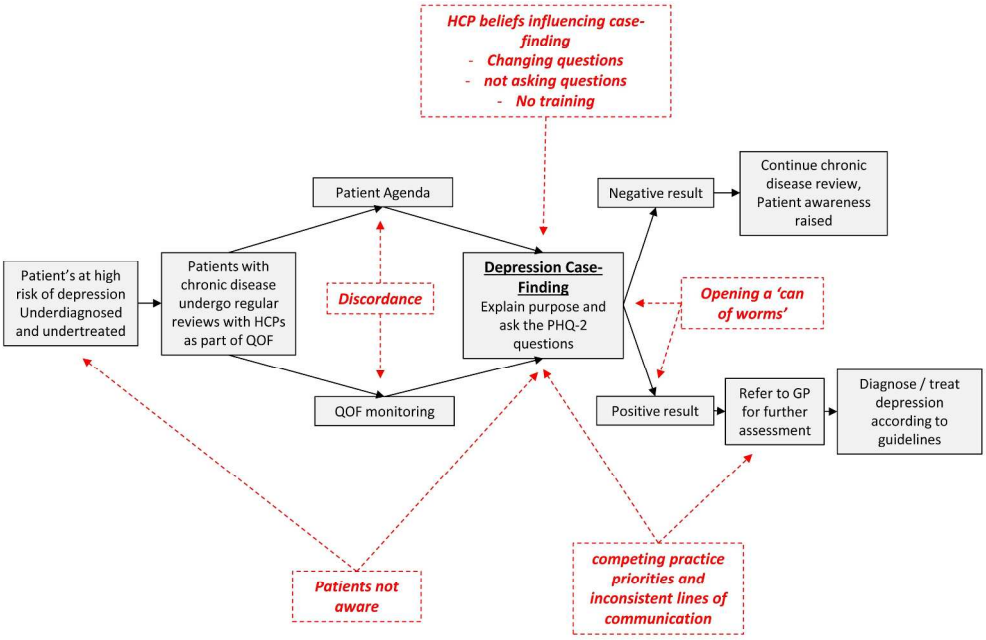


Figure 1. Flow chart of idealised depression case-finding process and barriers identified.
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