

# Labelling chronic illness in primary care: a good or a bad thing?

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## SUMMARY

*Traditionally the management of any chronic condition starts with its diagnosis. The labelling of disease can be beneficial in terms of defining appropriate treatment such as in coronary artery disease. However, sometimes it may be detrimental such as when x-rays are used to diagnose lumbar spondylosis leading to patients inappropriately limiting their activity. Chronic knee pain in the elderly is another example where applying labels is problematical. A common diagnosis in this situation is osteoarthritis, but this label can be applied in two ways: as a radiological diagnosis, or as a clinical one. The x-ray diagnosis, however, does not equate with the clinical syndrome, and vice versa. In addition, diagnosing knee pain as osteoarthritis does not necessarily help in management, since a patient's debility is more dependent upon their clinical signs and symptoms than the presence of radiographic osteoarthritis, and by the same token its clinical counterpart. GPs are consistent in their management of knee pain, but in attempting to diagnose the pain as osteoarthritis, these plans can alter and become more dependent on the actual diagnosis than the clinical picture. As a result management may well diverge from what the current best evidence supports. Diagnosis for diagnosis sake, should therefore be discouraged, and chronic knee pain gives us one example of why this is the case. GPs would be better placed to manage this condition if it was considered more as a regional pain syndrome, perhaps defining it simply as 'chronic knee pain in older people'. This example suggests that there is a pressing need in primary care to carefully consider in chronic disease when it is appropriate to be definitive in diagnosis such that when using disease specific labels, there is definite benefit for the patient and doctor.*

**Keywords:** chronic disease; diagnosis; knee osteoarthritis, radiography.

## Introduction

A fundamental part of medical school teaching is the concept of the differential diagnosis, a list of potential pathologies to which presenting symptoms and signs can be attributed. In theory this allows us to manage the presenting problem in the most appropriate and effective way. Patients themselves may have formulated a diagnosis of their own to explain their symptoms even before they have consulted their doctor, such a formulation being referred to by one pair of authors as a 'cognitive prototype'.<sup>1</sup> If symptoms match previous experience or known ideas, patients may more readily attach a label and act in respect of this prototype.<sup>2</sup> A simple example is 'conjunctivitis' for a watery, sore red eye. When symptoms — particularly those which are severe — do not conform to a known prototype, patients may be more likely to seek medical help to establish what the problem is, or, perhaps more importantly to them, relieve their uncertainty by getting a definite diagnostic label.<sup>2</sup>

The doctor has been trained to fulfil the diagnostic role, although this is traditionally more about management of the condition than resolving patients' anxieties. But do those anxieties end with the offer of a diagnosis? The application of a diagnosis has numerous potential outcomes, particularly with respect to a patient's treatment and subsequent anxieties. In this paper we consider several examples of the use of diagnostic labels in order to illustrate the different functions of diagnostic labelling in practice. Here we use the example of 'osteoarthritis' to explore the potential benefits and costs of labelling chronic illness in primary care:

- when the label defines important pathology,
- when the label does not define pathology,
- when the label defines irrelevant pathology, and
- when the label defines both a pathological and a clinical diagnosis.

## When the label defines important pathology

Chest pain is one of the most frequent presentations in primary care.<sup>3</sup> The physician's concern and the patient's anxiety are often focused on the cause of the pain. The role of diagnosis seems clear in this case: if the underlying problem is coronary artery disease, then specific interventions can be employed that are designed to relieve the symptoms, improve the function of the heart, and reduce the risk of dying from cardiovascular complications. The label or diagnosis of cardiac chest pain, if not welcome, is at least helpful to all concerned.

However, in one study, over 50% of patients seen by cardiologists for chest pain did not have coronary artery disease,<sup>4</sup> did not have another clearly demonstrable pathology to explain their pain, and received a diagnosis of non-

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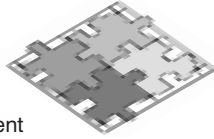
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**HOW THIS FITS IN***What do we know?*

Labelling chronic illness in primary care traditionally has dictated the management of the condition, though it appears that using 'diagnosis' in such a way can either be beneficial (as in coronary artery disease), or detrimental (as in spondylosis of the spine) to the patient's condition. With chronic knee pain one potential diagnosis is osteoarthritis, but the relationship of the symptoms to this is not absolute in terms of an x-ray diagnosis. Is diagnosing chronic disease in this context therefore useful?

*What does this paper add?*

The example of specifically diagnosing knee osteoarthritis might not only be detrimental to the patient's condition in terms of illness behaviour, but also may influence the general practitioner's (GP's) actual management plan in this condition. Since this change is then governed mainly by the presumed presence of osteoarthritis rather than the symptoms a patient has, such strategies may not address the debility a patient has. More consideration, therefore, needs to be given to the costs and benefits of GPs definitively labelling chronic illness.

cardiac chest pain. It might be assumed that this 'negative' label would be reassuring and helpful in communicating that serious disease is not present, yet studies of patients diagnosed with non-cardiac chest pain suggest otherwise.<sup>5</sup>

Despite having no underlying abnormality in their coronary arteries, 50% of patients with non-cardiac chest pain will be so disabled that they will not return to work, and will continue to restrict daily activities and experience chest pain.<sup>5</sup> Calling their disorder 'non-cardiac chest pain' and underlining the fact that it is non-cardiac in origin does not necessarily 'cure' these patients of their pain and disability, despite the apparent lack of pathology to explain their symptoms. They still have chest pain, it is disabling, and the doctor has not identified the cause. The diagnostic process has not improved the symptoms, and indeed may have contributed to their persistence. An example of this comes from a study of echocardiography to diagnose patients with either cardiac symptoms or a heart murmur. During the diagnostic process, 38% of asymptomatic patients began to experience 'cardiac' symptoms and eventually, with 97% of patients having no abnormality identified, 10% of the patients continued to experience problems.<sup>6</sup>

However, for those patients in whom coronary artery disease is established as the diagnosis, a 'biomedical model' of illness and diagnosis — which reduces the clinical problem to the single task of treating the cardiovascular disease — might be appropriate, given that the pathology underlying the symptoms has been identified. Yet Petrie *et al* showed that, after a myocardial infarction, it was the patient's perception of severity of their illness that determined the long-term outcome in respect of debility.<sup>7</sup> For doctor and patient the diagnosis of coronary artery disease is helpful in the immediate sense as it can guide intervention and improve clinical outcome. However, labelling and treating the problem of coronary artery disease appears to be insufficient on its own and general practitioners (GPs) will often operate

within a much broader 'bio-psycho-social model', acknowledging the importance of diagnosis but setting it in a wider context of patient perceptions, their response to illness, and their long-term ability to cope.<sup>2</sup>

The need for a view wider than the strictly biomedical one is true also when screening for asymptomatic conditions. Here a label is applied to patients who may well not have a 'cognitive prototype' illness in the first place as they are unaware they have a problem. By diagnosing hypertension, for example, doctors identify the presence of a chronic pathology; this may generate anxieties in much the same way as when patients cannot rationalise symptoms within the realms of their own experience. To the extent that treatments exist that reduce blood pressure and improve morbidity and mortality, this provides another example of 'labels defining a treatable pathology'. However, van Weel showed that applying such a label to patients with mild hypertension increased their dependence on health care and did not necessarily improve blood pressure levels compared with a control group, who had similarly elevated blood pressure but were not labelled as having hypertension and had not received treatment.<sup>8</sup>

**When the label does not define pathology**

For GPs long experienced in holistic care — considering always the social, mental, and physical context of the lives that their patients lead — the conclusion of the previous section on empirical studies of patients with chest pain will come as no surprise. Working within a bio-psycho-social model allows GPs to make a diagnosis in situations where the symptomatic syndrome is less easily defined than it is for something like cardiac chest pain, such as irritable bowel syndrome, chronic fatigue syndrome, and fibromyalgia. With such conditions gold standards of diagnosis do not exist, and authoritative bodies have developed classification criteria rather than pathological labels as a means of definition.

In the case of fibromyalgia and chronic fatigue syndrome, the resulting collection of features are not intended to define a strict diagnosis.<sup>9,10</sup> However, in everyday practice, both doctors and patients often use the syndrome labels in precisely this way.<sup>11</sup> Furthermore, in the case of irritable bowel syndrome, although the classification criteria may not line up with a defined pathology, the success of a treatment strategy may depend directly on the clear application of the criteria.<sup>12</sup>

One advantage of using these labels is that they express the sense that the symptoms are real and, particularly in the case of irritable bowel syndrome, that no other underlying serious condition such as cancer is causing them.<sup>12,13</sup> This is despite the fact that no clear pathology has been found to explain them nor any definitive treatment identified. There are positive effects in attributing a diagnosis, for example in fibromyalgia, where without it patients may be restricted in their access to therapeutic and financial assistance.<sup>14</sup> In addition, patients have expressed their relief at receiving the diagnosis for a symptom complex that investigations and hospital referrals had not been able to explain.<sup>14</sup> Indeed, in the case of irritable bowel syndrome, applying the criteria is directly associated with a reduction in referral for investigations and to secondary care.<sup>12</sup>

Other individuals, however, including some patients, have argued that attaching a diagnostic label, such as fibromyalgia, may actually be harmful to the patient because it creates the illusion that there is a definitive disease and pathology underlying the symptoms, and this itself may contribute to persisting pain and disability.<sup>15,16</sup> There are treatment programmes available for patients with widespread pain — the cardinal symptom of fibromyalgia — but these programmes help patients with the symptom regardless of whether or not they meet certain criteria, such as the American College of Rheumatologists' criteria for fibromyalgia.<sup>14</sup> Similarly, with chronic fatigue syndrome effective treatment strategies are directed at relieving the symptoms, rather than adopting standard therapies dependent on the diagnosis.<sup>17</sup> As such, there does not seem to be a logic in applying these diagnoses in order to guide or justify therapy. It is the presenting symptoms, together with the accompanying cognitive and emotional problems, that are deserving of address rather than a presumed pathology.

### When the label defines irrelevant pathology

Most concern should perhaps focus on situations in which using a diagnostic label may actually have a detrimental effect on a patient's condition, beyond an aggravation of their illness behaviour. Imaging in many musculoskeletal disorders provides the possibility of an objective diagnosis through visualisation of pathology. However, diagnosis alone may not lead to optimal treatment of patients and their illnesses. In patients with non-specific low back pain, for example, GPs may use lumbar spine x-rays because the patient is keen to know what is causing their backache. Occasionally, x-rays will identify important pathologies requiring specific treatments, but more often than not such x-rays are likely to show abnormalities that are not related to symptoms or do not helpfully add to treatment.<sup>18</sup>

A recent US study of magnetic resonance imaging scans in low back pain suggests that scans simply provide an ever wider range of pathological labels for the patient and their physician, without any accompanying improvement in outcomes.<sup>19</sup> The radiologist's report of an abnormality such as arthritis on a lumbar spine film may provide a diagnosis for a patient in search of a prototype, and it is plausible that this may have some positive benefits even though the diagnosis has little to do with the symptoms. However, as Roland and van Tulder argue, the patient may actually suffer as a result of this process as activity may be limited to 'protect' their damaged spine, which goes against current best advice about effective management of non-specific low back pain that includes encouragement to remain active.<sup>18</sup>

### When the label defines both a pathological and a clinical diagnosis

In order to explore these issues further, we have considered a condition that presents a different model of diagnosis and symptomatology discussed above, namely osteoarthritis of the knee. In the case of chest pain, there is a clear pathology towards which the diagnostic drive is directed, and the label of coronary artery disease is avoided once it has been excluded. In the case of fibromyalgia, there is no gold standard for a diagnosis and the label is used for a symptom

complex. By contrast, in the case of osteoarthritis of the knee, there is a presumed pathology as measured by radiographic changes and the pathological label 'osteoarthritis' might be reasonably limited to this concept. In practice, however, the diagnostic label is also applied to a symptom complex of pain and restricted movement.

The cardinal symptom of knee osteoarthritis is knee pain. This symptom is estimated to affect over 25% of the UK population aged over 55 years.<sup>20</sup> Although knee pain occasionally represents 'red flag' diagnoses, such as septic arthritis, rheumatoid, tumours, or injury, these will usually present with additional signs or symptoms that indicate the need for rapid referral and investigation. Most older people with knee pain and disability will not fall into these more serious categories. So what labels do GPs use for such patients? To answer this question, we reviewed the computerised medical records in a single group general practice in North Staffordshire.

The practice in question is a member of the North Staffordshire General Practice Research Network, which means that it has a well validated system of recording and coding morbidity for all patient contacts, using the Read code system of classification. All patients who consulted during a 12-month period and were given a morbidity code that was in any way associated with knee pain, or for whom free text that included reference to the knee or to knee pain was entered into the record, were identified from an anonymised download. All such patient contacts were grouped into four categories: knee injury, knee arthralgia, knee osteoarthritis, and other knee diagnoses (Supplementary table 1).

It became clear that osteoarthritis is an age-related label: at younger ages, knee problems are grouped predominantly under 'injury'; in middle years, diagnostic uncertainty is revealed with the predominant use of the symptom label of 'knee arthralgia'; above the age of 60 years, the use of 'osteoarthritis' as a label becomes increasingly common.

One possible explanation of such labelling is that it may simply reflect the Read code usage within this practice, but in either case the labelling is important since it is potentially linked to decisions relating to management. An earlier vignette work with a large GP sample demonstrated that the presence of clinical osteoarthritis, compared with simple joint pain, was related to a small increase in rates of referral to rheumatology (odds ratio [OR] = 2.73, 95% confidence interval [CI] = 1.7 to 4.5). When there was x-ray evidence of knee osteoarthritis, even in the absence of clinical symptoms, there was a considerable increase in referral to orthopaedics (OR = 31.34, 95% CI = 21.5 to 45.7).<sup>21</sup> It appears that the presence of osteoarthritis is important to GPs in terms of their decision making, but what do they actually mean when they use this diagnosis?

'Osteoarthritis' as a label potentially embraces two separate concepts. From a biomedical view, it represents the pathological process in the joint as revealed by radiographic features of articular cartilage loss, new bone formation (osteophytes) at the joint margins and subchondral bone thickening. In practice, however, this model is not a universally adopted one, as some GPs would be happy to diagnose knee osteoarthritis without an x-ray.<sup>21</sup> For these



doctors, there is the other diagnostic concept that applies the label of 'osteoarthritis' to a clinical syndrome of joint pain and restriction in older people.

Traditional teaching in primary care has encouraged this confusion. *The Oxford Textbook of Primary Medical Care*, for example, has a section headed 'osteoarthritis', which states that 'osteoarthritis starts as a clinical diagnosis. There is no clinical feature or combination of features that predicts the findings on an x-ray'.<sup>22</sup> Another section is headed 'chronic joint pain' and here it states that 'osteoarthritis is the most common cause of chronic joint pain ... chronic joint pain in the elderly mainly points to OA [osteoarthritis]'. These statements are clearly incompatible with a notion that the disease label is exclusively defined by the presence of radiographic osteoarthritis. In Khot and Polmear's *Practical General Practice*, there is a section headed 'rheumatological problem' and under the first subheading, 'osteoarthritis', appears the statement that:

*'Plain x-rays are not routinely indicated. They cannot confirm the diagnosis because the degenerative changes in several joints, e.g. spine and knees, start in middle age and x-rays correlate poorly with symptoms'.<sup>23</sup>*

In practice, if x-rays are present, the presence of radiographic knee osteoarthritis influences primary care management, and so it seems that GPs use the term 'osteoarthritis' in both ways — to describe the presence of pathology when radiographic evidence is available, and to describe the clinical syndrome when no radiographs are present. This is in contrast, for example, to coronary artery disease, where there is a clear understanding of the pathology to which the diagnostic label refers. If GPs worked purely along the lines of a biomedical model of pathology, then in this instance they would only use the osteoarthritis diagnosis when there is radiographic evidence of knee osteoarthritis pathology. However, it is apparent from empirical research and what is considered best practice that this is not always the case,<sup>21-23</sup> and 'osteoarthritis' may be used more broadly to label a clinical syndrome based on the assumption that the pathological disease is the underlying cause, regardless of whether there is an x-ray or not. However, it still assumes that there is a disease process that, at the histopathological level, is identifiable as osteoarthritis.

Doctors cannot confirm this diagnosis *in vivo*, and if x-rays are not being used as a substitute for histology in this model, does this mean that GPs are using the diagnosis in a way that requires neither x-rays nor the presence of histological osteoarthritis? The answer to this is unclear, but it could be that the label might be used as a convenient 'shorthand' for knee disorders in older people that encompasses non-specific knee symptoms such as pain and stiffness. These symptoms may be explained by the presence of pathological osteoarthritis, but the use of the label does not depend on the assumption that pathology is present. Perhaps this alternative use of the label is wrong and the diagnosis should be reserved for radiographically evident knee osteoarthritis where there is unequivocal evidence of pathology. For this situation there exist many studies that inform of us of the epidemiology, progression, and outcome

of this condition,<sup>20,26,29,30,40</sup> and so doctors can be clear about what patients might expect when they have knee pain associated with radiographic pathology. For other patients, such as older people, perhaps an alternative to osteoarthritis as a label for knee pain should be considered.

All of the approaches to using the label of 'osteoarthritis' that have been described in this paper may help to define the problem for the patient, even though they are based on different concepts of what the term 'osteoarthritis' means. However, as we have previously discussed, using diagnostic labels can have consequences that are not always beneficial. Do any of these approaches justify the use of the label in clinical practice? To answer this we must first examine in more detail whether it is reasonable to assume that the clinical syndrome of knee osteoarthritis is related to the presence of the radiographic disease.

### *Does clinical osteoarthritis reflect radiographic osteoarthritis?*

Patients over the age of 45 years complaining of knee joint pain will only have x-ray changes consistent with osteoarthritis in 47% of cases.<sup>24-27</sup> Conversely, only 50% of patients with x-ray evidence of knee osteoarthritis complain of pain.<sup>27</sup> In short, therefore, the clinical symptoms are not inevitably or exclusively attached to the radiographic disease. There are three possible explanations for this.

First, the clinical syndrome of osteoarthritis and the pathological disease visualised on x-ray may not be the same thing, even though they overlap.

Second, the definition of the clinical syndrome may be too vague and uncertain. The American Rheumatism Association convened a group to develop clinical criteria for the classification and reporting of osteoarthritis.<sup>28</sup> The best results were achieved by a complex statistical analysis of a combination of features including clinical examination, radiographic change, and laboratory findings. With this, levels of 94% sensitivity and 88% specificity could be achieved in diagnosing what the clinicians viewed as clear-cut cases of osteoarthritis when compared with other forms of arthritis. Clinical criteria alone offered a reasonable level of diagnostic certainty, giving 89% sensitivity and 88% specificity. However, these were hospital-identified cases in which extra- and peri-articular causes of knee problems were excluded. More recent work by Claessens *et al* has found, by contrast, that no single clinical characteristic or combination of characteristics could predict radiographic osteoarthritis of the knee in a population sample. A number of findings from medical history, physical examination, and laboratory tests were associated with radiographic knee osteoarthritis, but the strength of those associations was insufficient to predict pathology in the individual.<sup>25</sup> The accuracy of using clinical signs to diagnose radiographic osteoarthritis of the knee in primary care is, therefore, questionable in light of the current evidence.

Third, the imaging may be too crude and weak to identify all grades and stages of the osteoarthritic process. When the GP assumes a patient has osteoarthritis of the knee in the pathological sense, he or she is not in a position to confirm this diagnosis by histological examination of the joint, and x-rays are the general means to indicate

the underlying pathology.<sup>29</sup> There is some evidence that routine x-rays ordered from practice may not identify all osteoarthritis. Each knee has three compartments to it and osteoarthritis may occur in any of them. In practice, however, radiography is usually limited to a plain anteroposterior view.<sup>30</sup> This excludes from review, for example, the patello-femoral joint, an important area for investigation if radiographic evidence of osteoarthritis is being sought, as both McAlindon *et al* and Lanyon *et al* found.<sup>26,30</sup> The sensitivity with which symptoms can identify radiographic osteoarthritis might improve to 62–67% by including the patello-femoral joint (compared with 24% using the anteroposterior view only).<sup>24,26,30</sup> However, even with multiple views, knee pain in older people does not inevitably equate to radiographic osteoarthritis. Newer methods of imaging, such as computed tomography and magnetic resonance imaging scanning, detect more osteoarthritic changes in cartilage and bone than plain radiographs, although there is lack of consent about the meaning of these among radiologists.<sup>31,32</sup> However, this still leaves the question as to whether it is useful to have this pathological picture in terms of guiding or changing treatment.

### *Does imaging and diagnosis contribute to effective management of osteoarthritis?*

The Royal College of Radiologists has concluded that routine use of x-rays in managing knee pain in primary care is inappropriate.<sup>33</sup> Where osteoarthritis is evident on x-ray, there is good evidence that the severity can be reliably graded.<sup>34,35</sup> This might help with decisions as to when surgery may be appropriate, but its usefulness depends on clear identification of a group that, on clinical grounds, would benefit from surgery. Coyte *et al*, however, found that, among family physicians and rheumatologists in Canada, there was no clear agreement as to the value of grading the severity of radiographic knee arthritis in deciding on referral for a knee replacement.<sup>36</sup> This is also the case when applying the New Zealand priority criteria for joint replacement, in which radiographic severity plays only a minor role.<sup>37</sup> There is no clear evidence that x-rays add to clinical assessment in identifying those patients who would benefit from specific interventions.

For the patient, there is an assumption that giving and explaining a diagnosis is important as it helps with treatment. Authoritative sources place emphasis on the need in managing osteoarthritis to educate the patient that it is dissimilar to rheumatoid arthritis and that, as a condition, it can stabilise and improve in time.<sup>38</sup> If the GP chooses to label a knee condition as 'osteoarthritis', he or she has made a specific diagnosis that, in theory, commits to a treatment strategy that has been well developed and described in recent years for this condition. This includes weight reduction, analgesia, intra-articular injections, and possibly surgery.<sup>39</sup> The diagnosis, therefore, should predetermine the treatment plan.

This, however, is not always the case. As an example, Canadian family physicians, general internists, and rheumatologists showed speciality-related variations in key aspects of their management of osteoarthritis of the knee in the community.<sup>40</sup> The study suggested that, even when clear guidelines for management are in place for osteoarthritis of the

knee, doctors may continue a particular practice related to custom rather than consensus. Coyte *et al* and Mamlin *et al* similarly describe this speciality-dependent approach, further adding to the sense that, when managing osteoarthritis of the knee, family doctors apply a strategy different to that of their hospital colleagues.<sup>36,41</sup> The diagnosis appeared less important than symptoms in guiding management, and the speciality differences are likely to reflect their different patient populations. The study demonstrated that different groups of doctors had developed and retained different treatment plans that they had found useful in relieving symptoms in the patients whom they regularly saw, even though they had all diagnosed the same condition of osteoarthritis.

### *Is the label of osteoarthritis good or bad, and what is the alternative?*

The effect of specific beliefs and coping strategies on outcome in many rheumatic diseases is not clearly established,<sup>2</sup> and it is not known if labelling knee pain as osteoarthritis will have a positive or negative effect on how patients manage, cope with, and react to their condition. The question is whether doctors need to attach a label to the knee pain if it is not going to help select the most effective management and, more particularly, if the labelling may lead to attitudes, behaviour, and health care that have deleterious longer-term consequences.

The evidence reviewed above suggests that diagnostic labelling of chronic knee pain, after 'red flags' have been excluded, is not particularly appropriate for primary care. The textbook assumption that effective management of knee pain and disability can only be achieved if a diagnosis is constructed on a pathological model can also be challenged. An alternative model for primary care would be one that is not diagnosis specific, but that encompasses disease processes such as osteoarthritis. There is evidence to support an approach in which symptoms are being considered in their own right, rather than representing a diagnosis of osteoarthritis.

Two studies from Rotterdam indicated that the most important variables in predicting disability in a knee disorder were the presence of pain, morning stiffness, and restricted knee flexion rather than the radiographic changes of osteoarthritis.<sup>42,43</sup> Similar findings have been reported by McAlindon *et al*, who found that quadriceps weakness was the strongest predictor of disability in knee pain sufferers, independent of radiographic severity of osteoarthritis change.<sup>26</sup> O'Reilly *et al* found that depression was a better predictor of knee pain and its severity than the radiographic changes of osteoarthritis.<sup>44</sup> These findings suggest that a focus on treating these factors in general practice, rather than on diagnosis, would be appropriate. X-rays may form a useful part of this management — not as a means to diagnose for the sake of giving a diagnosis, but as an aid to planning for surgery once that has been clinically indicated. This is supported by an audit of GPs' referral for imaging of the knee where the main reason for using x-rays was to assist in the decision-making process for management of the problem.<sup>45</sup>

We therefore suggest that osteoarthritis should be regarded primarily as a chronic pain syndrome.<sup>46</sup> This syndrome of

'chronic knee pain in older people' focuses on the individual patient's pain and disability, reflects the central concerns of the patient, provides a simple model for primary care that steers away from diagnosis and, in fact, represents the current principles of general practice management of this problem, even if it does not reflect the language in which consultations about it are conducted.

If radiography in isolation does not reflect the clinical syndrome, and if the clinical syndrome is unreliable as an aid to the diagnosis of radiographic osteoarthritis in the knee, the conclusion seems to be that we should not 'chase' osteoarthritis. Where the clinical situation suggests that surgery may be the only option, an x-ray may be appropriate as it seems unlikely that a surgeon would operate on a radiographically normal knee. Most patients in primary care, however, will not be in that situation. Peat *et al* reviewed the prevalence of painful disabling knee osteoarthritis in people aged over 55 years and found that at any one time this was 10%, of whom only a quarter were severely disabled and might therefore warrant surgery.<sup>20</sup> The conclusion should guide us towards pain and disability being the clinical problem, and not simply because they represent the pathological syndrome of osteoarthritis.

## Conclusion

Diagnostic labels clearly have a useful part to play when symptoms directly indicate pathology, and effective treatment follows. However, they also have their limitations, and may be harmful in promoting bad ideas and practices. For many common symptoms in primary care, once the red flag diagnoses have been ruled out, the question of whether diagnosis does more harm than good needs to be asked, particularly when the diagnosis in question has a dubious link with symptoms and no specific influence on management. Sociological commentators on medical practice have often asked this question,<sup>2,47</sup> and yet there has been little empirical investigation into the risks, benefits and costs of labelling in everyday clinical practice.

Although a label may relieve the anxiety that compelled patients to seek medical intervention in the first instance, it may also overstate the problem and misdirect patient perceptions. Perceiving knee osteoarthritis as a chronic degenerative disease that may disable in the long term, and that will inevitably lead to operations may — as with labels such as non-cardiac chest pain — detrimentally affect wellbeing.

We have focused on knee osteoarthritis to illustrate that, even with a condition that is linked to a clear-cut pathology at one end of the symptom spectrum, chasing a diagnosis could be inappropriate and unnecessary in the initial management of the condition. This condition is better perceived as a chronic pain syndrome than a disease of regional pathology.<sup>46</sup>

A more general approach focused on symptom complexes may be possible, and reflects the way in which many GPs go about their work. However, a greater understanding of patients' and doctors' health beliefs, for example their motivation to seek medical advice; their perceptions of vulnerability to disease and its seriousness, as well as the costs and benefits to them would help determine the situations in which a diagnostic label is useful or harmful in managing a

patient's condition. The language of the consultation forms an integral part of this, and the ideas that patients and doctors have about the meaning of a diagnosis need to be investigated further.

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**Supplementary information**

Additional information accompanies this paper at: <http://www.rcgp.org.uk/journal/index.asp>

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